



NAVAL AIR STATION PENSACOLA REGION

Environmental Compliance Manual

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Disclaimer

This course is intended to provide general guidance on construction related environmental compliance for parties performing work at U.S. Naval Air Station Pensacola Region installations. Contractors are still required to meet all environmental guidelines established by federal, state, and local regulations. This course and the manual are not intended to be the sole source of information for environmental compliance. Those using the manual are encouraged to seek additional help from professionals regarding specific regulatory determinations.

Introduction

Naval Air Station Pensacola (NASP) Region is known as the “Cradle of Naval Aviation.” NASP Region installations include Whiting Field, Saufley Field, and Corry Field, and are the launching point for the flight training of every Naval Aviator, Naval Flight Officer, and Enlisted Aircrewman. Nearly 15,000 aviation personnel in aeronautical technical phases of naval operations are trained here each year. In addition to providing host command support such as bachelor quarters, commissary and exchanges, the air station provides specialized support through Air Operations, Supply and Management Information Systems Departments. NASP Region directly supports the training of student aviators from Officer Candidate School, initial flight gear issue, and survival training, all the way to the coveted “Wings of Gold.” NASP Region currently employs > 9600 military and 6,800 civilians throughout its installations.

Naval Air Station Pensacola is committed to fulfilling its defense mission while ensuring that all activities on NASP Region installations will prevent pollution from entering the soil, air, or the water.

The Command Mission of NASP Region is: To provide quality support to tenants and other customers, enabling them to meet mission requirements.

The Command Vision Statement: As we move into the 21st century, Naval Air Station Pensacola Region is recognized as:

- The premier naval installation in the Department of the Navy
- A model total quality organization that clearly recognizes people as its most valued asset
- Exemplary customers, employers, suppliers, and neighbors
- Effective and efficient managers of air, land, and sea resources, clearly distinguishing us as the provider of choice for operational and training support
- Acknowledged leader in preserving its natural beauty, tradition, and rich history, enhancing our reputation as the most aesthetically pleasing installation in the Navy
- Highly ethical stewards of public trust, maintaining both a future focus and daily drive for continuous improvement

Guiding Principles of NASP Region:

We:

- Lead by example
- Encourage open communication
- Give our people the authority and incentive to produce a quality product or service
- Foster continuous improvement
- Treat people with dignity and respect
- Maintain a highly educated and well-trained workforce
- Accomplish our mission through teamwork
- Promote creativity, initiative, and innovation
- Are wise stewards of our natural resources
- Focus on the needs of our customer
- Are responsible and accountable resource managers

We are committed to:

- Equal opportunity for all
- A safe, healthy, drug-free environment
- Honesty, integrity and the highest standards of moral and ethical conduct
- Strong community relations by being a trusted neighbor
- Professional, safe, responsive action in support of mission
- Fact-based decision-making
- Providing the tools and innovative technology to meet future needs

Table of Contents

Section 1	Introduction to Environmental Compliance.....	1
	Objectives for this Training Course	1
	How to Use the Manual	2
	What is Environmental Compliance?	2
	Why is Environmental Compliance Important?	3
	Goal for Environmental Compliance	3
	Overview of Environmental Legislation.....	4
	How Laws Are Made:.....	4
	Laws Applicable to NASP Region	5
	How Inspections and Audits are Conducted	5
	Inspection Targeting	5
	Inspection Process	6
	What Happens if Violations Are Discovered	7
	NASP Region Actions Against Violators.....	7
	Government Agency Enforcement Process.....	7
	Penalties Incurred for Not Being in Compliance	8
	Environmental Regulations which Apply to Construction Activities	9
	Some Regulated Activities	9
	Common Regulated Materials and Wastes	10
	General Environmental Compliance Pointers.....	10
	Who Is Responsible for Compliance?	11
	Where to Go to Get Help to Stay in Compliance.....	11
Section 2	Water.....	1
	Major Federal Laws and Regulations	1
	Florida Applicable Laws and Regulations	2
	General Water Quality Standards.....	2
	Wastewater	3
	Drinking Water	3
	Surface Water	4
	Ground Water	4



Wastewater	5
Permit Requirements	5
Wastewater Treatment Plants — POTW vs. FOTW	5
Well-Pointing	6
Accidental Discharges From Broken or Severed Industrial or Domestic Sewer Lines	6
Bypasses	7
What Do Regulators Look For During an Inspection?	8
Drinking Water	9
Permit Requirements	9
Reporting Requirements	9
Backflow Prevention	10
Disinfections When Line Breaks Occur	10
Lead and Copper in Drinking Water	10
What Do Regulators Look for During an Inspection?	11
Project Cleanup	11
Web Sites for Further Information	12
 Section 3 Waste	 1
Solid Waste	1
US EPA Applicable Laws and Regulations	1
Florida Applicable Laws and Regulations	1
General Solid Waste Management Guidelines	2
Construction and Demolition Waste Considerations	2
Lead-Based Paint.....	3
Special Waste	4
Fluorescent Bulbs and other Mercury Containing Devices	4
Used Oil	4
Batteries.....	5
What do Regulators Look For During an Inspection?	5
Hazardous Waste	6
US EPA Applicable Laws and Regulations	6
Florida Applicable Laws and Regulations	7
General Hazardous Waste Requirements	8
Hazardous Waste Determination.....	9
General Guidelines for Construction Waste	10
Batteries.....	14
Generator Status and Requirements	14
Hazardous Waste Disposal	17
Reporting Requirements for Hazardous Waste	17
What Do Regulators Look for During Inspections?	18
Records.....	18
Storage and Collection of Hazardous Waste	18
Preparedness and Prevention.....	19
Project Cleanup	20
Web Sites for Further Solid Waste Information.....	21

Web Sites for Further Hazardous Waste Information.....	21
Section 4 Air	1
US EPA Applicable Laws and Regulations	1
Florida Applicable Laws and Regulations	2
General Definitions	2
Permit Requirements	3
Stationary Sources	3
Asbestos	4
Who Needs to Know About Asbestos?	4
Who is Responsible?	4
What Kinds of Facilities are Affected?	4
What Kinds of Projects are Involved?	5
Asbestos Management Requirements.....	5
Types of Asbestos-Containing Materials (ACM)	5
Regulated Asbestos Containing Material (RACM).....	5
Some Asbestos-Containing Materials (ACM)	6
What To Do If You Encounter Asbestos	6
Surveys	6
Notification	7
Removal/Abatement -- RACM.....	7
Renovation/Abatement-Flooring	7
Removal/Abatement Roofing	8
Renovation/Abatement - Cat II	8
Demolition.....	8
Disposal	8
Open Burning	9
Refrigerants	9
Unconfined Emissions of Particulate Matter	9
What Do Regulators Look for During Inspections?	10
Project Cleanup	10
CONTRACTOR CHECKLIST	11
Section 5 Wetlands.....	1
Major Federal Laws And Regulations	1
Florida Applicable Laws And Regulations	2
General Description Of What Is Regulated	2
Permit Requirements	3
Who To Check With About Wetland Delineations	3
Typical Projects That Impact Wetlands	3
Dredging and Filling Permits	4
General Protection Activities	4
What Do Regulators Look For During Inspections?	4
Web Sites for Further Information	5

Section 6	Stormwater	1
	US Applicable Laws And Regulations	1
	Florida Applicable Laws And Regulations	1
	Stormwater Permit Requirements	2
	Erosion Control	2
	Best Management Practices for Controlling Erosion	3
	What Do Regulators Look For During an Inspection?	3
	Project Cleanup	4
	Web Sites For Further Stormwater Information	5
Section 7	Storage Tanks	1
	US EPA Applicable Laws and Regulations	1
	Florida Applicable Laws and Regulations	2
	General Description	2
	Aboveground Tanks	2
	Underground Tanks	3
	Notice Requirements for USTs	3
	Who To Check With If You Encounter a Tank	4
	Discharge From Tanks	4
	What To Do If a Discharge Occurs	4
	What Do Regulators Look for During Inspections?	5
	Project Cleanup	5
	Web Sites for Further Information	7
Section 8	Pesticides	1
	Major Federal Laws And Regulations	1
	Florida Applicable Laws And Regulations	1
	Navy Pesticide Policy	1
	General Description of Requirements	2
	Licensing Requirements for Applicators	2
	Storage and Disposal	4
	Pesticide Mix/Load Sites	4
	Worker Protection Standards	5
	What Do Pesticide Inspectors Look for During Inspections?	5
	Project Cleanup	6
	Web Sites For Further Information	7
Section 9	Natural and Cultural Resources	1
	General Description	1
	NEPA	1
	Archaeological/Historical/Cultural	1
	Endangered/Protected Species	2
	Reporting Requirements	2

What Do You Do If You Unexpectedly Encounter A Protected Natural or Cultural Resource?	2
Project Cleanup	2
Web Sites for Further Information	3
Section 10 Pollution Prevention.....	1
US EPA Applicable Laws and Regulations	1
Florida Applicable Laws and Regulations	1
General Description	1
Source Reduction	2
Purchasing	2
Project Run-off	2
Elimination of the Use of Toxic Materials	2
Typical Projects Implemented	2
Benefits	3
Role of the Regulators	3
Project Cleanup	3
Web Sites for Further Information	4
Section 11 Contamination Remediation	1
US EPA Applicable Laws and Regulations	1
Florida Applicable Laws and Regulations	1
General Description of What Is Regulated	1
Typical Projects Implemented	2
Benefits	2
Role of the Regulators	2
Project Cleanup	3
Web Sites for further information	4
Section 12 Quality Control.....	1
Self-Assessments	1
ISO 14001	1
Environmental Management Systems	1
Contractor Quality Control	1
Project Cleanup	4
Web Sites for Further Information	5
Section 13 Environmental Health and Safety	1
US Applicable Laws and Regulations	1
Florida Applicable Laws and Regulations	1
General Description of What Is Regulated	2
General Description of Safety Requirements for Construction Contractors	2
Contents of the Accident Prevention Plan.....	3

Contents of the Health and Safety Plan	5
What to Expect during an Inspection	7
Project Cleanup	7
Web Sites for Further Information	8
Section 14 Spill Reporting and Release Control	1
US Applicable Laws and Regulations	1
Florida Applicable Laws and Regulations	1
What to Do In Case of A Spill	1
Emergency Contact Numbers	2
Project Cleanup	2
Web Sites for Further Information	3

Introduction to Environmental Compliance

Environmental regulations impose a number of responsibilities on construction companies. It is important that project managers be aware of all environmental requirements that may impact their activities so that they can assure compliance. The information in this course specifically applies to the construction industry in Florida; however, many of the requirements are federal regulations, which apply in all states and on federal property.

Project managers and construction supervisors should apply the same management practices to environmental compliance that they use for other regulatory requirements such as OSHA and building codes. While all of the laws of the state of Florida are applicable to NASP Region operations, some situations require more specific stipulations for the operation of a certain unit or the involvement in a certain activity. These activities need special permission, or permits. A contractor needs to ask about permits that should be obtained, or are currently in effect in an area in which they are working.

Objectives for this Training Course

This course is intended to help personnel working at NASP Region installations understand and strive for the objectives held by the NASP Region by:

- Successfully blending the military mission with conserving, protecting, and restoring natural resources
- Upholding environmental compliance in every activity that occurs on any NASP Region installation
- Maintaining respect for natural resources that goes beyond environmental compliance

This course is designed for Navy and contractor personnel, and is intended to be a model for military facilities throughout the United States. A manager/supervisor or project manager is the first individual responsible for ensuring environmental compliance of activities performed by assigned staff. The specific duties of a manager/supervisor or project manager include but are not limited to:

- a. Resource allocation
- b. Authority to interpret how work is performed
- c. Oversight responsibilities
- d. Accountability
 - Ensures proper disposal of hazardous waste
 - Selects right staff to perform the work
 - Ensures that staff are properly trained
 - Evaluates work performed by staff for violations of environmental rules and regulations

How to Use the Manual

Use the manual as a starting place for deciding what types of activities are regulated at different jobsites. This manual should, at the very least, provide you with the basics of environmental compliance and will help you understand when to ask more specific information regarding a task. While the manual is designed to accompany a slide presentation and formal training course, it can be easily updated with current information as regulations and agency policies change. There is a list of Internet web sites at the end of each chapter, and you are encouraged to refer to these for more detailed information. Many useful resources can be obtained through the various regulatory agencies that produce them, the Internet, or university, government or law libraries at little or no charge.

What is Environmental Compliance?

For the most part, environmental compliance is adhering to all federal, state and local laws pertaining to air, water and waste. While it conjures up visions of mounds of paperwork, expensive legal fees, and confusing interpretations, most environmental laws are based in common sense. Basically, you should be able to conduct your business without causing harm to the quality of the air, water and land around your operations. Because the duties of contractors vary from job to job and facility to facility, it is extremely important that communications remain open from the pre-bid phase of the project to the end. Ask your clients specific questions about what environmental impacts they are concerned about regarding the work you are doing, and do some research on your own to ensure your liability is limited. Ignorance of the law is no defense in the environmental law arena.

Total continuous environmental compliance should be your ultimate goal. Only a regulatory agency can determine the facility's legal compliance status, and this is normally done through inspections. The Navy expects that even though environmental compliance is expensive, you are expected by the regulators, your creditors, customers and other taxpayers to account for it as a normal cost of doing business.

Why is Environmental Compliance Important?

The obvious answer to why environmental compliance is important is to sustain the earth for future generations. The reasons to strive for compliance are many. Some include reducing liability, enhancing professional reputation, saving money, increasing workforce pride and fostering relationships with regulators. Once a company begins to experience compliance with environmental regulations, it may realize some very positive peripheral effects. This, in turn, may prompt the company to take measures beyond compliance by adding pollution prevention measures to business activities.

Goal for Environmental Compliance

Although the primary mission of the Navy is national defense, we are committed to protecting our environment and conserving our natural resource heritage both for ourselves and future generations. To assure fulfillment of our commitment, the Navy has adopted the following environmental, natural and cultural resources quality goals:

- Demonstrate leadership in the Federal sector by ensuring compliance with Federal, state, and local environmental and natural resources laws and regulations
- Promote an environmental protection and natural resources stewardship ethic within the Navy work force
- Prevent pollution at Navy activities
- Clean up Navy shore activities where past waste disposal practices have resulted in potential ground water contamination and adverse health effects to the general population
- Provide for the stewardship of natural resources and historical and archeological artifacts located on Navy activities
- Integrate the archeological and historic preservation requirements with planning and management activities to encourage practical, economically feasible rehabilitation and adaptive use of National Register properties

Overview of Environmental Legislation

An overview of environmental legislation as it applies in Florida, in addition to the basics of Federal laws, will be presented in this part of the course. A portion of this section will be devoted to explaining the importance of permits and what types of permits you might be expected to encounter. Since inspections by federal, state, and local regulators are periodically conducted at NASP Region, these will be discussed, as well as the function of internal audits on a military base. When violations are found during inspections and audits, different actions may occur; therefore, the enforcement process will also be covered.

Many federal laws are enforceable by state inspectors. Some that are enforced at the state level include the Clean Air Act, Resource Conservation and Recovery Act, Clean Water Act and Safe Drinking Water Act provisions.

How Laws Are Made:

Laws are made at many different levels, and are a major tool used in protecting the environment. This section will attempt to explain the basics of how laws are made at each level of government.

- **Federal level:** When a bill passes through congress and is signed into law, it is called an “act.” After the act becomes law, specifics of the act are published in the United States Code (U.S.C.). The U.S. Code is considered the official record of all laws. Once a law is entered into the USC, an agency then creates regulations to carry out the law. Any regulations made by a federal agency are required to go through a public comment period and other scrutinies, so they are published in the Federal Register. After all public comment periods have expired, the final rule is published in the Federal Register. All final rules are “codified” in the publication, “Code of Federal Regulations.”
- **State level:** When a bill passes through the Florida legislature, it is called an act. The specifics of the act are included in the “Florida Statutes.” Most environmental regulations in Florida stem from Chapters 376 and 403 of the Florida Statutes. Once the legislation becomes statute, rulemaking by state agencies takes place. As with federal legislation, extensive public comment periods and a checks and balances process takes place during rulemaking. All proposed legislation is published in the Florida Administrative Weekly, and must pass approval of the Environmental Regulatory Commission. The final legislation is codified into the Florida Administrative Code.
- **County and City:** While varying throughout counties and municipalities, all processes include legislation proposal, approval, rulemaking and implementation. Throughout the process, the public is given many chances to provide comments. Final law is typically called an ordinance or a code.

No environmental regulation is allowed to be less stringent than the federal version. Although many federal laws are adopted by states for enforcement, the actual delegation process varies throughout programs.

Laws Applicable to NASP Region

Military installations are governed by federal, state and local regulations. Some of the Agencies that NASP Region works with to maintain compliance include:

- Federal: US Environmental Protection Agency (EPA)
US Occupational Safety and Health Administration (OSHA)
- State: Florida Department of Environmental Protection (FDEP)
Florida Department of Agriculture and Consumer Services (DACS)
Florida Department of Business and Professional Regulation (DBPR)
Northwest Florida Water Management District
West Florida Regional Planning Council
- Local: Escambia County Neighborhood and Environmental Services
Department (NESD)
Escambia County Utilities Authority (ECUA)
Santa Rosa County agencies (for Whiting Field)

Ignorance of a regulatory requirement is not an excuse for non-compliance, and agencies will pursue enforcement. Knowingly violating a regulation is a criminal offense, and is punishable as such.

Because most environmental regulations are site-specific, it is good to know the regulatory requirements of a facility prior to bidding a job. That way, a contractor can know how much it will cost to maintain compliance and train staff at the particular job.

How Inspections and Audits are Conducted

Inspections may be conducted by federal, state or local entities. When the Navy performs a self-inspection, it is known as an ECE, or Environmental Compliance Evaluation.

Inspection Targeting

- Regulations are written to include governmental agencies' right to inspect facilities and operations for the purposes of protecting human health and the environment.
- Inspections are typically unannounced, but sometimes are scheduled in advance. Because of regulatory agencies' site access authority to protect human health, they usually are not under any requirement to provide prior notice of an inspection.

- Most inspections conducted keep with the reporting requirements expected of a delegated program. This is to ensure that the agency receiving money to implement a program is actually allocating resources appropriately.
- Inspection sites are usually selected due to a routine schedule of the inspecting agency, a random choice, or in response to a complaint.

Inspection Process

The inspection has many steps that begin in the regulator's office, and end with a final report.

- **File Review** — Generally conducted at the regulator's office in order to become familiar with operation types anticipated during the inspection.
- **Preliminary Interview** — Inspector introduces him/herself to a responsible official and describes the planned course of inspection.
- **Walk-through** — Physical inspection of the operations. Always be present during an inspection. Many times, inspectors will ask employees questions. It is important that employees know their responsibilities and feel confident in their knowledge. Anything the regulator sees the business owner or contractor should also see. Take notes, and ask questions if you are confused about the inspector's intentions.
- **On-site Record Inspection** — Typically involves review of records since the last inspection. If no previous inspection was conducted, records of up to five years old may be requested for review.
- **Exit Interview** — Inspector should inform responsible personnel of inspection findings. Make sure to ask if violations were found or if you will receive any enforcement notices.
 - Review any problems that the inspector observed to make sure you fully understand what you need to address. Immediately begin addressing these concerns, even before the inspector leaves the site.
 - If the inspector requests additional information, make sure a timeframe is given to you. Normally, additional information is delivered to an inspector within 10 days, but may vary with the nature of material and individual inspector.

- Recommendations for corrective actions are provided in instances where a facility was unaware of an existing problem and may need advice to help return to compliance.
- An agreement of follow-up actions is discussed to outline mutual understanding of what actions are needed to bring about compliance. This does not mean that penalties will not be assessed, but that compliance is necessary.
- **Follow-Up** — Resolves any issues discovered during the inspection that could not be immediately addressed on inspection day. This inspection phase also includes writing the report. If no violations were discovered, the report will be sent alone. If violations were discovered, the follow-up period may be carried over into an enforcement process.

What Happens if Violations Are Discovered

Always take action immediately upon discovering that a violation exists. If you can resolve a bad situation during the inspection, you may be able to lessen the likelihood of enforcement.

NASP Region Actions Against Violators

For contractors, various actions can be taken. First, a contractor can be directly fined by FDEP for any violations that occur on their contract. Second, the Naval Air Station can withhold contract funding until violations have been corrected and fully inspected. Depending on the nature of the violation, this could be a significant amount of money. Third, any violation could result in a negative past performance rating for the contractor. Past Performance ratings are being used at the Naval Air Station as a factor for future awards.

For Federal employees, a number of sanctions can be imposed. Depending on the nature of violations, actions could range from letters of counseling to suspensions.

Government Agency Enforcement Process

Most government enforcement actions for environmental regulations are administrative. This means a facility will most likely receive a legally worded letter or notice informing that violations have been discovered. A timeframe for contacting the agency is given. After contacting the agency, a meeting discussing the enforcement process is held. At that time, any misunderstandings can be cleared up, but also penalties may be mentioned. Most environmental enforcement actions are closed due to entry into some type of administrative agreement or order.

If violations are determined to be willfully committed with intent to avoid a law, or if violations result from willful negligence, then criminal enforcement will result. “Willful” indicates that the responsible party knew their activities were wrong or illegal, and perhaps engaged in cover-up activities. Willful negligence typically means the responsible party knowingly ignored a situation or failed to act appropriately to prevent damage to the environment. Criminal prosecution many times leads to jail time, penalties, or both. After criminal proceedings have taken place, civil enforcement is pursued by appropriate agencies to obtain monetary penalties and/or remediation of contamination.

Penalties Incurred for Not Being in Compliance

Non-compliance is expensive!

- In Florida, for most violations, the statutory authority of FDEP is \$10,000 per violation per day. Hazardous waste violations warrant \$50,000 per violation per day. The EPA only has authority for \$25,000 per violation per day. In addition, additive factors are used in many cases. These factors include:
 - History of non-compliance
 - Showing bad faith in efforts to comply
 - Displaying willful negligence
 - Consideration for multiple events of non-compliance
- Damage to the environment (such as contaminated soil, ground/surface water, or destroyed habitat wetlands) must be returned to a thriving condition. While many times this is difficult, if not unfeasible, to do, significant amounts of money are spent on studies, sampling, monitoring equipment, and actual restoration activities.

Costs of non-compliance can be separated into three categories: monetary, reputation, and liability costs.

Monetary costs include the cost of penalties, project shutdowns, corrective actions and environmental damages, underbidding of projects, and increased insurance and bonding costs.

Reputation costs are extremely important. Everyone can recall the media coverage that the Exxon Valdez oil spill received. Environmental pollution is not accepted well by the public, and therefore violations can be very detrimental to a business. Violations are sometimes reportable on pre-qualification documents. Also, personal and business relationships may be stressed if others feel threatened by a polluter’s business dealings. Many times, contractor and owner conflicts occur, especially if there is some confusion over who actually is responsible for the violation. Negative public perception of a business could cause long-term problems in trying to secure future work. Once a business is labeled as being a polluter, it is very difficult and costly to regain original status in the community.

Liability costs of non-compliance include personal injury claim payment when an individual's health was compromised due to unlawful environmental practices; OSHA penalties when workers are endangered because of noncompliance issues; criminal enforcement when negligence or willfulness is involved in the environmental regulation violations; and third-party lawsuits when another's property or livelihood is negatively impacted by unlawful environmental practices of an associate or neighboring business.

Environmental Regulations which Apply to Construction Activities

- Hazardous Waste Management
- Asbestos
 - Performing surveys
 - Giving proper notification
- Lead Paint Removal and Disposal
- Stormwater Management and Erosion Control
- Air Emissions and Particulate Control
- Solid Waste Disposal
- Wetlands

Some Regulated Activities

- | | |
|------------------------|--|
| ▪ Demolition projects | ▪ Abrasive stripping |
| ▪ Building renovations | ▪ Chemical stripping |
| ▪ Road-building | ▪ Dewatering or Well-pointing |
| ▪ Landscaping | ▪ Vehicle washing |
| ▪ Pest control | ▪ Boiler, piping, HVAC system repair/maintenance |
| ▪ Painting | ▪ Degreasing |

Demolition projects may involve asbestos removal, lead paint removal, PCB ballast disposal, or fluorescent light bulbs removal; they always involve solid waste management.

Building renovations may involve asbestos, lead paint, PCB ballasts, fluorescent bulbs, solvents, industrial wastewaters from latex paint cleanup and/or A/C unit installation/maintenance.

Roadbuilding typically involves solid waste disposal, erosion control and stormwater management issues.

Landscaping usually involves erosion control and pesticide management.

Common Regulated Materials and Wastes

(as Prepared for EPA Office of Pollution Prevention and Toxics, October, 1996)

- Spent fluorescent and HID (high intensity discharge) light bulbs
- Mercury-containing devices (thermostats and controls)
- Lead-based paint (paint chips and liquid paint)
- PCB/non-PCB ballasts
- Mineral spirits, toluene and acetone
- Paints and stains
- Paint thinners
- Waste aerosol cans (paints, cleaners and adhesives)
- Spent rechargeable batteries
- Roof patch/tar
- Carpet glue
- PVC primer and glue
- Brushes, rollers and rags contaminated with oil-based paint and solvents
- Sludges from cleaning oil paints and equipment
- Flammable and combustible products-materials that contain petroleum distillates or chlorinated hydrocarbon compounds
- Construction and demolition debris
- Asbestos

General Environmental Compliance Pointers

Liquids are prohibited for disposal in Florida landfills, and therefore are not allowed to be disposed into any dumpster, garbage or trashcan.

The only liquid that can be legally discharged on the ground or to storm drains is rainwater. Anything else needs to be reviewed to determine if a permit should be obtained first.

Investigate where drains lead. Holes in the ground with a grate over them may lead to stormwater systems, sanitary sewers, or nowhere. Where the discharge might flow has bearing on what is allowed to be disposed of there.

Open burning is prohibited on NASP Region installations.

Common practice is not always legal. Just because things have always been practiced in a certain way does not mean they are right . . . this just means that not enough people have either been caught or educated about the subject.

NO WASTE OF ANY TYPE IS TO LEAVE NASP REGION PROPERTY. ALL WASTE MUST BE MANAGED THROUGH NASP REGION ENVIRONMENTAL WASTE DISPOSAL MANAGEMENT PROTOCOLS.

Who Is Responsible for Compliance?

YOU ARE! Government regulations do not clearly assign environmental compliance responsibilities to the owner or contractor. Both can be held liable for failure to comply; however, the regulator will try to determine who actually caused the violation. Wise contractors and owners establish and document compliance responsibilities in contract documents. If you don't, agency officials will usually make the decision for you, and their decision may be based on limited information. Make sure that contractual negotiations specify the decision-making duties of each party during the project regarding environmental issues.

Where to Go to Get Help to Stay in Compliance

When dealing with environmental issues on someone else's property, it is always best to ask as many questions as possible. Along the way, document whom you spoke with and the issue that was discussed. Unfortunately, environmental issues are very complicated, and how you word a question can sometimes change the answer. The more documentation you have, the easier it will be to keep from getting confused. The following list contains different places you can go to receive information on environmental issues. Most of the time, state agencies are willing to provide qualified individuals to attend staff and trade association meetings in order to provide no-cost training for groups.

NASP Region Environmental Compliance Office 850/452-4611 X 111 (Tom Kelley)

When you are working on the NASP Region base installations, the Environmental Office is always willing to help problem-solve or make decisions about the best manner in which to handle a situation.

US EPA

Florida is in Region IV, and the headquarters for this region are in Atlanta, GA.

US Army Corps of Engineers

ACOE should be contacted in case of certain dredging, filling and wetlands activities.

State Regulatory Agencies:

- Florida Department of Environmental Protection
The FDEP is delegated by EPA to enforce most environmental regulations that have been promulgated at the federal level.
- Florida Department of Business and Professional Regulation
DBPR licenses individuals to perform some of the activities that are affected by environmental regulations. For example, asbestos survey and removal activities are required to be conducted by a licensed contractor.
- Florida Department of Agriculture and Consumer Services
FDACS is involved in pesticide and fertilizer issues.
- Water Management Districts
Pensacola is located in the Northwest Florida Water Management District. Each district office has different regulatory authorities and involvement in wetland and water use issues.

Local Governments:

- Escambia County
Inspectors perform code-enforcement inspections and provide outreach services to small businesses regarding pollution prevention issues. Their involvement usually involves situations such as solid waste dumping and citizen complaints of an environmental nature.
- Escambia County Public Health Unit

Other government-related contacts:

- Local Emergency Planning Councils
- Small Business Administration — Small Business Assistance Program

Industry trade associations

Internet

Water

Regulations govern many different “types” of water in Florida. This section deals with them in two ways: water that needs to be managed, and water that needs to be protected. Sound confusing? Water that is managed usually refers to wastewater, stormwater, and drinking water. Water that needs protection refers to surface water or ground water. These are termed “Waters of the State,” and imply a noble condition deserving protection. Most of the rulemaking that has occurred regarding water regulations deals with protecting “waters of the state” and strives to keep them safe from pollution, but all of the water legislation ultimately results from the goal to protect human health. In Florida, the US Environmental Protection Agency (USEPA) and the Florida Department of Environmental Protection (FDEP) are the main governmental agencies responsible for the management and protection of “waters of the state.”

Major Federal Laws and Regulations

- Wastewater:
 - Clean Water Act (CWA)
 - Resource Conservation and Recovery Act (RCRA)
- Drinking Water
 - Safe Drinking Water Act (SDWA)
- Surface Water
 - CWA
 - SDWA
- Ground Water
 - CWA
 - SDWA

Clean Water Act (CWA) -- The Clean Water Act is actually an amendment to the original Federal Water Pollution Control Act of 1972. The CWA came into existence in 1977, gave EPA the authority to set effluent standards on an industry basis and continued the requirements to set water-quality standards for all contaminants in surface waters.

The CWA makes it unlawful for any person to discharge any pollutant from a point source in navigable waters unless a permit (National Pollutant Discharge Effluent Standard or NPDES) is obtained. In 1987, the CWA was reauthorized to include toxic substances, citizen suit provisions, and fund sewage treatment plants (POTWs) under the Construction Grants Program. The CWA provided for EPA delegation of many permitting, administrative and enforcement aspects of the law to state governments. In state with the authority to implement CWA programs, EPA still retains oversight responsibilities.ⁱ

Resource Conservation and Recovery Act (RCRA) -- RCRA controls hazardous waste management from the “cradle-to-grave.” This includes the generation, transportation, treatment, storage and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous wastes. Important amendments to RCRA are the Hazardous and Solid Waste Amendments, or HSWA, which strictly governs land disposal of hazardous waste.ⁱⁱ

Safe Drinking Water Act (SDWA) -- The SDWA was established to protect the quality of drinking water in the U.S. The law focuses on all waters actually or potentially designed for drinking use, whether from above ground sources or underground sources. The Act spells out safe standards of purity and requires all owners or operators of public water systems to comply with primary, health-related standards. State governments also encourage attainment of secondary standards, which are nuisance related.ⁱⁱⁱ

Florida Applicable Laws and Regulations

The state of Florida has received delegation from EPA to enforce provisions of the CWA, RCRA, and SDWA. The delegation means that an inspector from the appropriate Florida regulatory agency, usually the Department of Environmental Protection, can act on behalf of the EPA. The applicable state regulations that are listed in this section are not intended to be all-inclusive, but a good representation of the most probable state regulations that most likely would apply for construction activities. It is always good to establish a good rapport with regulators in your area so that you are familiar with whom to contact when questions arise.

General Water Quality Standards

Water quality standards are designed to protect the state’s drinking water resources, both for present and future use. In cases where the drinking water source is already contaminated or threatened by nearby contamination, these standards are used to guide cleanups of the source contamination area. Because the state of Florida does not yet have rules governing clean soil levels for remediation sites, these standards are also used as target levels for negotiating restorations of contaminated sites.

- Chapter 62-4, Florida Administrative Code (F.A.C.) Permits
- Chapter 62-301, F.A.C. Surface Waters of the State
- Chapter 62-302, F.A.C. Surface Water Quality Standards
- Chapter 62-520, F.A.C. Ground Water Classes, Standards, and Exemptions

Wastewater

- Chapter 62-40, F.A.C. Water Policy
- Chapter 62-550, F.A.C. Drinking Water Standards, Monitoring, and Reporting
- Chapter 62-600, F.A.C. Domestic Wastewater Facilities
- Chapter 62-601, F.A.C. Domestic Wastewater Treatment Plant Monitoring
- Chapter 62-602, F.A.C. Drinking Water and Domestic Wastewater Treatment Plant Operators
- Chapter 62-603, F.A.C. Detergents
- Chapter 62-604, F.A.C. Collection Systems and Transmission Facilities
- Chapter 62-610, F.A.C. Reuse of Reclaimed Water and Land Application
- Chapter 62-611, F.A.C. Wetlands Application
- Chapter 62-620, F.A.C. Wastewater facility permitting
- Chapter 62-621, F.A.C. Generic Permit for the Discharge of Produced Ground Water from any Non-Contaminated Site Activity and Petroleum Contaminated Sites (effective 2/14/2000)
- Chapter 62-625, F.A.C. Pretreatment Requirements for Existing and New Sources of Pollution
- Chapter 62-640, F.A.C. Domestic Wastewater Residuals
- Chapter 62-650, F.A.C. Water Quality Based Effluent Limitations
- Chapter 62-660, F.A.C. Industrial Wastewater Facilities
- Chapter 62-699, F.A.C. Treatment Plant Classification and Staffing

Drinking Water

- Chapter 62-521, F.A.C. Wellhead Protection
- Chapter 62-524, F.A.C. New Potable Water Well Permitting in Delineated Areas
- Chapter 62-550, F.A.C. Drinking Water Standards, Monitoring, and Reporting
- Chapter 62-555, F.A.C. Permitting and Construction of Public Water Systems
- Chapter 62-560, F.A.C. Requirements for Public Water Systems that are Out of Compliance
- Chapter 62-602, F.A.C. Drinking Water and Domestic Wastewater Treatment Plant Operators
- Chapter 62-699, F.A.C. Treatment Plant Classification and Staffing

Surface Water

- Chapter 62-301, F.A.C. Surface Waters of the State
- Chapter 62-302, F.A.C. Surface Water Quality Standards

Ground Water

- Chapter 62-4, F.A.C. Permits
- Chapter 62-40, F.A.C. Water Policy
- Chapter 62-529, F.A.C. Ground Water Classes, Standards, and Exemptions
- Chapter 62-521, F.A.C. Wellhead Protection
- Chapter 62-522, F.A.C. Ground Water Permitting and Monitoring Requirements
- Chapter 62-524, F.A.C. New Potable Water Well Permitting in Delineated Areas
- Chapter 62-531, F.A.C. Water Well Contractors
- Chapter 62-532, F.A.C. Water Well Permitting and Construction Requirements

Wastewater

In general, wastewater is “produced,” not naturally occurring, water which comes from domestic, industrial or process sources. Typical wastewaters that may be generated at a construction site include:

- Water from washing latex paint from brushes and rollers
- Discharge water from testing piping for boiler and HVAC systems
- Washwater from cleaning equipment
- Produced groundwater from dewatering activities (well-pointing)

Permit Requirements

Florida Administrative Code refers to “Waters of the State” as being either surface water or ground water. Any activity that results in the discharge of produced water into Waters of the State requires a permit or an exemption from FDEP. NASP Region allows no wastewaters to be discharged to the ground, into the storm water management system or directly into surface waters without the proper permits or exemptions being obtained. Because NASP Region has received environmental permits for its own wastewater treatment facilities and for the piping systems that direct water to their treatment facilities, NASP Region Environmental staff must approve any produced waters that contractors wish to discharge into the sanitary sewer.

The CWA requires that wastewater is to be managed separately from other waters, including storm water, and site specific conditions usually are written into a facility’s permit. Like other plants, the wastewaters that enter the treatment facilities at NASP Region are monitored for contaminant concentrations. After treatment, the effluent is tested to determine if any contaminants exist at unpermitted levels. In Florida, effluent can be permitted for discharge into either surface water or ground water, depending upon the facility.

Wastewater Treatment Plants — POTW vs. FOTW

POTW is an acronym for “Publicly Owned Treatment Works.” A POTW is a wastewater treatment plant that is owned by a state, county, or municipality. An FOTW is a “Federally Owned Treatment Works.” Because an FOTW has much more control over the nature of the wastes received, it is permitted under different requirements.

POTWs are afforded regulatory exemptions that FOTWs do not receive. For this reason, some wastewaters may be allowed to be discharged to the sanitary sewer when working

in town, but the same wastewaters would not be allowed to flow to the NASP Region treatment plant.

Well-Pointing

Well-pointing generally refers to dewatering of an area by pumping groundwater out of the ground, typically during construction activities. Water that is removed for dewatering purposes must not be discharged to the ground, to the storm water system or directly into surface waters without prior FDEP approval. The FDEP has Generic Permits for discharges from known petroleum contaminated sites and assumed non-contaminated sites. Generally, if the groundwater being pumped is from a non-contaminated site, and if it can be pumped and contained to an upland location on-site and allowed to percolate into the ground without any runoff, a permit will not be needed.

Accidental Discharges From Broken or Severed Industrial or Domestic Sewer Lines

The permittee shall report to the Department any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

a. The following shall be included as information which must be reported within 24 hours under this condition:

1. Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,
2. Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
3. Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
4. Any unauthorized discharge to surface or ground waters, not otherwise reported in accordance with b. below.

b. The permittee shall report all unauthorized releases or spills of untreated or treated wastewater in excess of 1,000 gallons per incident, or where public health or the environment may be endangered, to the STATE WARNING POINT TOLL FREE

NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Warning Point:

1. Name, address, and telephone number of person reporting.
2. Name, address, and telephone number of permittee or responsible person for the discharge.
3. Date and time of the discharge and status of discharge (ongoing or ceased).
4. Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater).
5. Estimated amount of the discharge.
6. Location or address of the discharge.
7. Source and cause of the discharge.
8. Whether the discharge was contained on-site, and cleanup actions taken to date.
9. Description of area affected by the discharge, including name of water body affected, if any.
10. Other persons or agencies contacted.

If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department shall waive the written report.

- **Sewage Spill Response:**

- Eliminate and/or contain the spill
- Clean and Disinfect:
 - If the spill occurred in an area of high foot or car traffic, use granulated chlorine or sodium hypochlorite for disinfecting.
 - If the spill occurred on grass or near surface water, use lime for disinfecting.
- Notify the local FDEP District office and the County Health Department.

Bypasses

A “bypass” is the intentional diversion of waste streams from any portion of a treatment works, and is prohibited except under extreme circumstances. In the event of a bypass, FDEP must be notified within 24 hours.

The only time a bypass is allowed is if it was unavoidable to prevent loss of life, personal injury, or severe property damage. FDEP will still take enforcement against the facility, responsible party or both if the bypass could have been avoided through proper maintenance or preventative engineering controls.

If a bypass is necessary and imminent, the permitted facility is required to notify FDEP and seek permission for the bypass prior to the event. If the bypass occurs and was unanticipated, then notification must be made to the FDEP within 24 hours. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if this is essential for maintenance to assure efficient operation.^{iv}

What Do Regulators Look For During an Inspection?

During an inspection of construction activities, regulators review records to determine if proper permits were obtained for all activities associated with wastewater management. They also look at site preparation, ensure that Best Management Practices Plans are in place and are being followed, and, if applicable, ensure produced wastewater discharges are being disposed of to properly permitted facilities.

During a wastewater treatment plant inspection, regulators review paperwork to determine if the plant is operating in accordance with the permit. Requested paperwork includes, but is not limited to, equipment calibration records; sample collection, laboratory analysis and reporting records; daily operation and maintenance logs, and sludge disposal records. Training documentation may also be requested. Physical inspection of the plant will include tanks, equipment, and visible piping.

Drinking Water

Every time people turn on their tap to get water for cooking, drinking, or brushing their teeth, they expect it to be clean. The SDWA was created with the intention of protecting our drinking water and ensuring that contaminated water is restored. In Florida, keeping drinking water safe through regulating drinking water utilities is a cooperative effort among FDEP, EPA, county Health Units, and municipalities. The Department of Agriculture regulates bottled water, and the appropriate Water Management Districts regulate consumptive use.

Permit Requirements

Chapter 62-555, F.A.C., sets the permitting requirements for public water systems including the location and construction of wells serving the system and the treatment plant. Construction of public water systems requires permits and the use of lead-free pipes, plumbing fixtures, solder and flux.

Reporting Requirements

Federal and state agencies recognize the potential for contamination and the mechanisms through which these systems may become contaminated. The Florida Department of Environmental Protection, in response to the Federal Safe Drinking Water Act, requires public water systems to test samples of finished water from each PWS. Water samples are taken from the entry point to the distribution system and at various points within the distribution system. They are then tested for a variety of chemical and bacteriological contaminants. Analytical results are then submitted to the Florida Department of Environmental Protection for review. Sampling and reporting frequencies vary according to facility category, contaminant type and sampling history.

The different types of contaminants are divided into groups. Below is a list of each contaminant group:

- Inorganic Contaminants
- Volatile Organic Contaminants
- Synthetic Organic Contaminants
- Radionuclides
- Microbiological Contaminants
- Other Miscellaneous Contaminants
- Secondary Drinking Water Standards

Backflow Prevention

Backflow occurs when non-drinking water travels into the same pipe as drinking water. This can happen when drinking water system pipes are cross-connected with some other water pipes, such as air conditioning system piping or an irrigation system pipe. If there is no preventing mechanism of some type affixed at the cross connection, contamination of the drinking water could occur.

Places where backflow preventers should be used include tall buildings, buildings where hazardous chemicals may be used or may pose a contamination threat, and facilities that utilize reclaimed water.

Disinfections When Line Breaks Occur

If there is a break in a potable water supply line, or if contaminated water backflows from a cross connection, disinfection procedures are specified in the regulations. Disinfectants used in Florida are chlorine, chlorine dioxide, chloramines, and ozone. They are designed to kill or inactivate pathogenic microorganisms.

Disinfection is also typically required during any construction project when tie-in is made to a potable water supply. This could occur during a renovation or new construction project. Contractors should pay close attention to specification requirements on disinfections as they relate to potable water supplies.

Lead and Copper in Drinking Water

Lead in drinking water results primarily from corrosion of materials that contain lead-related building plumbing, such as lead solder, brass, bronze or other alloys containing lead that are lead-based and come in contact with water. The amount of lead attributable to corrosion by-products in the water depends on a number of factors, including the amount and age of lead-bearing materials susceptible to corrosion, the way they were manufactured, how long the water was in contact with lead-containing surfaces, and how corrosive the water is towards these materials. The corrosivity of water is influenced by a number of factors, including acidity, alkalinity, dissolved solids and hardness. In general, soft acidic waters are more corrosive to lead than hard waters.

"Lead free" as defined in the SDWA means that solders and flux may not contain more than 0.2 percent lead, and pipes, pipe fittings, and well pumps may not contain more than 8.0 percent lead. In general, plumbing products that are on the market contain 8% or less lead. The amount of lead contained in the plumbing product is usually governed by its manufacturing process. In order to find out how much lead is contained in a plumbing product, you should contact the manufacturer or the importer/distributor and ask for a certificate of lead content.^v

Copper in drinking water results from essentially the same reasons as lead--corrosion of copper piping, brass, bronze and other alloys containing copper that are in contact with the water. Using non-copper pipes and fittings and using corrosion inhibitors can control copper contamination of drinking water.

What Do Regulators Look for During an Inspection?

During a Drinking Water System Inspection, regulators review paperwork to determine compliance with all pertinent state rules. Paperwork requested includes, in part, monthly operating reports, O&M logs, laboratory analytical results, cross-connection control program information, storage tank inspection results, system map and flushing program information. Physical inspection of the system includes wells, treatment plants, equipment, storage tanks and visible piping.

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites for Further Information

- US Environmental Protection Agency official website
<http://www.epa.gov>
- Local Government Environmental Awareness Network
<http://www.lgean.org>
- Florida Department of Environmental Protection
<http://www.dep.state.fl.us>
- Water Management Districts
 - St. Johns River WMD
<http://sjr.state.fl.us/>
 - South Florida WMD
<http://www.sfwmd.gov/>
 - Southwest Florida WMD
<http://www.swfwmd.state.fl.us/>
- Florida Association of Stormwater Utilities
<http://www.fasu.org/>

CONTRACTOR CHECKLIST

- ❑ Ensure that erosion control measures (silt fence and hay bales, for example) are in good condition and are installed around the entire site.
- ❑ Ensure that all FDEP disinfection criteria is met when placing new drinking water lines in service.
- ❑ Have a storm water permit prior to any well point activities.
- ❑ Use granulated chlorine or sodium hypochlorite for disinfecting any wastewater spill in any hard surface area (asphalt or concrete). Contain spill within the area.
- ❑ Use Lime for disinfecting any wastewater spill in any soft surface area (grass etc.). Contain spill within the area.

Waste

Solid Waste

US EPA Applicable Laws and Regulations

Federal regulations regarding municipal solid waste landfills are found in Title 40 Code of Federal Regulations (CFR) Part 258. Federal landfill standards included in that section establish:

- Location restrictions that ensure landfills are built in suitable geological areas away from faults, wetlands, flood plains, or other restricted areas.
- Liner criteria for landfills that specify that geomembrane is reinforced with two feet of clay on the bottom and sides of the landfill.
- Operating practices that specify compaction and coverage of waste to help reduce odor, control litter, insects and rodents, and protect public health.
- Groundwater monitoring protocols to determine whether waste materials have escaped from the landfill.
- Closure and postclosure care to include covering landfills and providing for long-term care of closed landfills.
- Corrective action criteria to control and clean up landfill releases and protect groundwater.
- Financial assurance requirements to fund environmental protection measures during and after landfill closure.

Florida Applicable Laws and Regulations

The Florida Solid Waste Management Act directs FDEP to carry out the solid waste program in Florida; the specific requirements for solid waste management are contained in Chapters 62-701 through 62-722, F.A.C. Solid waste regulations outline types of wastes that should be disposed in the following facilities:

- Class I (Sanitary Landfill) — These landfills accept non-hazardous waste from households and commercial operations, and are equipped with thick liners, ground water monitoring wells, and leachate collection systems. Operations for this type

of landfill are regulated to minimize any health threat from either waste it receives or creatures it attracts.

- Class III (Construction and Demolition Debris Landfill) — A C&D landfill is only allowed to accept clean, non-contaminated, non-hazardous debris which originates from a construction or demolition activity.
- Class III (Yard Trash Waste Site) — This facility receives waste from routine maintenance of landscaped areas, and is many times tied in with mulching operations.
- Materials Recycling Facility — MRFs receive mixed solid waste that needs to be separated for recycling.

General Solid Waste Management Guidelines

- No waste, solid or liquid may be disposed on the ground.
- All solid waste must be disposed of in an appropriate landfill.
- Liquid wastes must be disposed of in a Class I or Class III lined landfill. Do not pour liquids on the ground or spray them on trees or into the air.
- Construction and demolition debris may not be burned.

Construction and Demolition Waste Considerations

Demolition and construction activities generate solid waste that might go to any of these facilities. Typically, demolition and construction activities generate concrete, metal, drywall, glass, asphalt, brick, steel, and wood waste. During demolition activities, though, additional hazardous wastes are encountered that require special handling. Some demolition wastes that must be given special consideration when deciding proper disposal:

- Thermostats containing mercury
- Switches containing mercury
- Asbestos
- Fluorescent bulbs
- PCB ballasts
- Batteries (lead-acid, lithium, cadmium, mercury, nickel-cadmium, etc.)
- Lead pipes and surfaces painted with lead-containing paint

The Department of Environmental Engineering Sciences at the University of Florida has done extensive investigation into the composition of C & D waste, and has prepared literature to guide contractors through the process of removing of hazardous materials from buildings. In their findings, the best way to keep track of the demolition waste that needs special disposal is to create an inventory of items prior to beginning any demolition work. Walk through the building, room by room, and identify items that should be removed. Use a building floor plan to mark the number of items in each room, if possible. Instruct workers how to remove these items carefully, and ensure that they are packaged properly for disposal/recycling. Keep an inventory of the items that are

removed, and compare it to the original tally. Careful planning of removal activities limits the amount of breakage and lowers the likelihood of having unpermitted waste mixed with your “clean” C & D waste.

- Thermostats, switches, and fluorescent bulbs containing mercury all have the ability to be recycled. Your local FDEP office maintains a current list of permitted facilities able to process your waste. Most of the recyclers are able to help you arrange for packaging and transportation to their facility.
- Asbestos has strict management standards that are discussed further in this manual under Section IV — Air Regulations.
- Fluorescent light ballasts should be removed and segregated according to PCB content. Non-PCB ballasts can be disposed with C & D debris, but PCB-containing ballasts should either be recycled at a ballast recycling facility or sent for disposal at a landfill permitted under the Toxic Substances Control Act (TSCA) requirements.
- Batteries most likely encountered during a demolition activity include sealed lead-acid, wet lead-acid, and nickel-cadmium types. These batteries should be recycled, and are not allowed to be disposed of in Florida landfills.

Lead-Based Paint

Buildings constructed before 1978 should be tested for the presence of lead prior to demolition or renovation. The proper manner for testing is to scrape paint from the surface and have it analyzed by a certified environmental laboratory. If the analysis shows lead at a level of more than 5.0 milligrams per liter using the toxicity characteristic leaching procedure (TCLP), then the waste paint scrapings must be managed as hazardous waste. All workers in the area must be outfitted with appropriate protective clothing and respiratory protection, and trained to wear it. OSHA also requires that anyone who wears respiratory protection must be given medical clearance by a physician first. The regulations allow material painted with lead paint to be disposed in a C & D landfill as long as the paint is not peeling or chipping off the surface. If it is completely adhered to the surface, the lead paint does not have to be removed prior to disposal, and the material does not have to be managed as a hazardous waste. If the paint is chipping and peeling from the surface, then it should be properly removed and managed as hazardous waste for disposal.

NASP Region will help you determine if the paint is hazardous waste or not. If you are working on a job off base, you may be able to use a colorimetric test kit that can be obtained at a paint or home improvement store. If the test indicates the presence of lead, then the best bet would be to handle the waste as hazardous waste.

To control dust and chips, use tarps to catch the debris and only work on days when there is little to no wind. Also, try to tackle small areas at a time to make the job more manageable.

In Florida, only a licensed demolition contractor or the property owner is allowed to perform the demolition. Usually a permit is required from the local government, and this is followed up by inspections to ensure that all utilities have been properly abandoned following completion of the demolition. Because of the potentially hazardous nature of demolition waste and the strict requirements of solid waste facilities in Florida, the demolition contractor must remove any potentially hazardous portions first and manage it separately from non-hazardous waste.

Special Waste

In an effort to promote recycling, Florida has promulgated rules that allow certain wastes to be managed under more relaxed requirements provided they are sent for recycling or beneficial recovery. If the wastes are not recycled, then they are fully regulated under the hazardous waste management rules.

Fluorescent Bulbs and other Mercury Containing Devices

Fluorescent bulbs contain mercury. As long as the requirements of 62-737, F.A.C. are met, the bulbs can be sent for recycling. If they are not managed properly, FDEP can determine that hazardous waste violations may exist and enforce accordingly.

A facility that generates more than 10 fluorescent lamps per month may choose to either manage the bulbs as hazardous waste or package and transport them to a recycling facility in accordance with the requirements of 62-737, F.A.C. If a facility generates less than 10 fluorescent lamps per month, they may seek permission from a municipal solid waste landfill to dispose of them there. (Permission should always be obtained in writing when possible.)

Used Oil

USED OIL REQUIREMENTS FOR ALL GENERATORS 40 CFR PART 279

1. Used oil may only be stored in tanks or containers.
2. Containers and tanks must be in good condition and not leaking.
3. Containers and tanks must be labeled "Used Oil."
4. Spills must be cleaned up, and contaminated materials disposed of properly.
5. Oil filters may not be disposed of in landfills; they must be recycled by an oil filter processor or municipal refuse incinerator (FAC 62-710).

Batteries

Batteries that are not recycled are subject to disposal regulations of RCRA.

Types of batteries that have recycling facilities available:

- Lead-acid wet cells
- Sealed lead-acid
- Nickel-cadmium

The batteries should be collected and stored out of the weather in a manner that preserves their casing integrity. If the batteries should leak their contents, the contamination is subject to hazardous waste regulation and cleanup.

Always request a receipt from your recycler, and maintain your receipts for inspection.

What do Regulators Look For During an Inspection?

Segregation of various waste streams is important. Keep C&D debris separate from vegetative waste. Make sure that any roll-off dumpsters are free of hazardous waste. Any containers that held material should be empty and dry prior to throwing them away. Place buckets and cans into the waste receptacle in a manner that rainwater will not accumulate. If containers fill with rainwater, inspectors may request analysis of the water to ensure it is not hazardous waste. The analysis will be costly, and having liquids in the waste container could result in a penalty.

FDEP inspections are seldom announced and are usually a surprise, so make sure that housekeeping around the jobsite is a priority. A clean site is easier to manage, makes a great first impression on an inspector, and usually results in a quick inspection. The less time an inspector has to spend on your jobsite the less work time you lose. If an inspector spends enough time at a site, it is likely that he/she will discover a problem.

Keep all receipts showing proper disposal of your solid waste and any test results that you may have. Make sure they are organized and all information on them is completed. If the record review period seems to take a long time, this is normal. The more organized the records are, the quicker they can be reviewed. Sometimes, inspectors are not only auditing your records, but are also using your information to determine if the landfill is monitoring their incoming waste.

Hazardous Waste

“Hazardous waste” is a legal term that describes certain toxic, ignitable, corrosive or reactive wastes generated in manufacturing, industrial or other processes. Your company is responsible for making hazardous waste determinations correctly.

On a construction site, typical hazardous wastes that may be encountered include:

- Paint containing lead
- Lead-contaminated paint chips
- Latex paint containing mercury
- Fluorescent bulbs (contain mercury)
- Paint thinners
- Chemical paint strippers
- Oil-based paints
- Solvents for cleaning and degreasing
- Solvent-based adhesives and glues
- Rags contaminated with solvents
- Pesticides
- Aerosol cans

In the section “Construction and Demolition Waste Considerations,” waste handling practices for several items are discussed. Many wastes are generated during construction and renovation phases that are not encountered during demolition. For instance, if lead paint is adhered to the surface, it can be demolished and disposed in a C & D landfill. During a renovation, however, the paint must be removed and sent for disposal as hazardous waste, or encapsulated on the surface (usually a wall or trim moulding).

Aerosol cans and compressed gas cylinders must be managed so their contents are not vented to the air. Aerosol cans may either be drummed and disposed at a permitted hazardous waste facility or processed in a commercial “can crusher” that is outfitted for a 55-gallon drum. No aerosol containers are allowed to be disposed in solid waste roll-offs, trashcans, dumpsters, or other garbage receptacles. All aerosols are managed as hazardous waste, and must be collected for processing through NASP Region Environmental.

US EPA Applicable Laws and Regulations

Congress promulgated the federal hazardous waste regulations in 1976 in response to public outcry against “midnight dumping.” In the Resource Conservation and Recovery Act, EPA was named as the agency to control hazardous waste management from “cradle-to-grave.” That means that EPA regulates any waste that meets the definition of “hazardous” from the time of generation through transportation, treatment, storage, and disposal of the hazardous waste. The actual Act can be found in Chapter 42, U.S. Code,

and the codified regulations are contained in Title 40 Code of Federal Regulations, Parts 260 through 279. In 1986, RCRA was amended through the Hazardous and Solid Waste Amendments (HSWA) that required phasing out land disposal of hazardous waste. Some of the other mandates of this strict law include increased enforcement authority for EPA, more stringent hazardous waste management standards and a comprehensive underground storage tank program.

On November 8, 1984, the President signed into law the Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA). The amendments required the EPA to evaluate all listed and characteristic hazardous wastes to determine which wastes should be restricted from land disposal. These restrictions are called the Land Disposal Restrictions (LDR). As of May 8, 1990, most hazardous wastes must be treated to meet these standards prior to disposal in permitted hazardous waste landfills or surface impoundments. The LDR rule prohibits the dilution of restricted wastes as a substitute for effective adequate treatment.

Before treating a HW or disposing of it off site, the generator must determine whether the waste is subject to the LDR rules, what hazardous constituent levels are in the waste and whether the waste must be treated or already meets the applicable treatment standard or prohibition level upon generation.

A copy of the federal hazardous waste regulations (40 CFR 260-268) can be obtained from public, college or law libraries; EPA Region 4, Atlanta Federal Center, 61 Forsyth Street, S.W., Atlanta, Georgia 30303-3104 (404/562-8579); the U.S. Government Printing Office, Washington, D.C. 20402; or the U.S. Government Printing Office, 100 West Bay Street, Suite 100, Jacksonville, Florida 32202 (904/353-0569). Copies of FAC 62-730 may be obtained from the Department of Environmental Protection (FDEP). In December 1996, generators and permitted hazardous waste facilities became subject to new air emissions standards for containers, tanks and recycling equipment. **For information and copies of new regulations, call the RCRA Hotline at 1-800-424-9346.**

Florida Applicable Laws and Regulations

Florida has adopted and incorporated portions of Title 40 Code of Federal Regulations (CFR) Parts 260-271 into its Florida Administrative Code (FAC) Rule 62-730. In some instances, FAC 62-730 is more stringent than 40 CFR. Because the state of Florida has proved to EPA that it possesses the regulatory base and resources to administer the program successfully, EPA has delegated Florida the ability to enforce most hazardous waste regulations on their behalf. FDEP has an agreement with EPA that mandates the assessment of penalties for violations of the Resource Conservation and Recovery Act (RCRA) requirements.

Many local governments have regulations and ordinances regarding the management of hazardous materials and/or wastes. Please check with those agencies for information on local requirements.

General Hazardous Waste Requirements

The hazardous waste (HW) regulations require that a generator determine if his waste is hazardous, determine his generation rate and volume, and manage it properly from the time of generation until final disposal. This part will describe these very complicated regulations in general terms.

Hazardous wastes (HW) are wastes *listed* in 40 CFR 261 Subpart D as hazardous by the U.S. Environmental Protection Agency (EPA). Or they are wastes characterized in 40 CFR 261 Subpart C as hazardous by exhibiting one of four characteristics: ignitability (i.e., an oxidizer or flash point $< 140^{\circ}$), corrosivity (i.e., pH < 2 or > 12.5), reactivity or toxicity. A hazardous waste determination must be made of any waste material generated (§262.11). If the material is hazardous, then it must be recycled, treated, stored or disposed at a proper HW facility. HW cannot be disposed of on or in the ground, or in local landfills, septic tanks or injection wells. Also, regardless of quantity, the generator of HW is ultimately responsible for the waste from "cradle to grave," and can be held liable for improper management of HW even though it may have been sent to a "proper" HW management facility using a licensed transporter.^{vi}

HAZARDOUS WASTE MAY NEVER BE DISPOSED OF IN SEPTIC TANKS OR ON THE GROUND AT FACILITIES THAT DO NOT HAVE HAZARDOUS WASTE PERMITS.

HAZARDOUS WASTE MAY ONLY BE BURNED IN PERMITTED HAZARDOUS WASTE INCINERATORS. DO NOT DISPOSE OF HAZARDOUS WASTE BY EVAPORATION.

What is Hazardous Waste?

For something to be hazardous, it must first be a solid waste. EPA defines solid waste as garbage, refuse, sludge or other discarded material. This includes solids, semi-solids, liquids and contained gaseous materials.

Some wastes are specifically excluded from the definition of solid waste and from the hazardous waste regulations. For example, domestic sewage, irrigation return flows and in-situ mining wastes are excluded from the definition of solid waste.

Household wastes, agricultural wastes used as fertilizers and cement kiln dust are examples of wastes that are excluded from the definition of hazardous waste. These wastes are not subject to the federal hazardous waste regulations, but may be subject to other federal regulations or state waste programs.

Hazardous Waste Determination

If your waste is solid waste, you must determine if it is hazardous waste. It is your responsibility as a generator either to test your waste or use your knowledge of the waste to make a determination about its properties. A hazardous waste determination can be made by using process or product knowledge, laboratory sampling results and/or material safety data sheets. In many cases, a combination of two or more sources may be necessary for proper determination. Always be prepared to back up a determination with test results should an inspector question a hazardous waste determination decision.

Once you know what is in your waste, you can then determine if EPA considers it hazardous. EPA defines hazardous waste in six different ways: characteristic waste (toxic, ignitable, corrosive or reactive), listed waste, mixtures of wastes, derived-from wastes, contaminated media or contaminated debris.

All characteristic hazardous waste is identified with a “D” code before its number. There are four types with the following characteristics:

- Ignitability (D001):
 - Is a LIQUID with a flashpoint < 140 degrees F (60 degrees C) and/or an alcohol content \geq 24% OR
 - Is a SOLID which will ignite through friction, absorption of moisture or spontaneous combustion
 - Ignitable compressed gas
 - Oxidizer
- Corrosivity (D002): Always is a LIQUID with a pH \leq 2.0 or \geq 12.5
- Reactivity (D003): In contact with water, shock, heat or pressure, the material may undergo a rapid or violent chemical change
- Toxicity (D004 – D043): 8 metals and 31 organics

EPA has developed several lists of hazardous wastes that are contained in 40 CFR 261.30. If your waste appears on any of these lists, it is hazardous. Wastes on these lists are hazardous regardless of concentrations of hazardous constituents in the waste. The wastes identify non-specific source wastes, specific source wastes and discarded commercial chemical products.

- Non-specific source wastes (designated with “F” waste codes):
 - Spent solvents used for degreasing
 - Sludges from solvent distillation units
- Specific source wastes (designated with “K” waste codes):
 - Waste from specific processes in specific industries . . . not very commonly found in Florida

- Discarded commercial chemical products:
 - P-listed: pesticides and poisons; cyanide compounds, sodium azide, some arsenic compounds, nicotine
 - U-listed: specific unused chemicals that are no longer useful. (Outdated acetone that has been abandoned or destined for disposal)

A “mixed waste” is a mixture of nonhazardous solid wastes and listed hazardous waste that is considered a hazardous waste, unless it no longer exhibits the characteristic of a hazardous waste.

A “derived-from” hazardous waste is any solid waste that is generated from the management (treatment, storage or disposal) of a listed hazardous waste, including sludge, spill residue, ash, emission control dust or leachate.

Contaminated media is considered a hazardous waste when that media (ground water, soil or sediment) comes in contact with listed hazardous waste.

Contaminated Debris is any manufactured object, plant or animal matter and/or natural geological material that exceeds 60 millimeters particle size. If that contaminated media is intended for disposal and has come into contact with a listed hazardous waste, then it, too, is considered hazardous waste.

General Guidelines for Construction Waste

Fluorescent bulbs (contain mercury)

If contractor can reuse light bulbs or any items containing mercury ballasts, then it is permissible to take these lights, switches or other items off-base.

If light bulbs cannot be reused, contractors must check ballasts for a “no PCB” sticker. If one exists, contractor can dispose of in a dumpster as regular construction waste. If not, light bulbs with ballasts must be disposed of as hazardous waste. Mercury switches must also be disposed of as hazardous waste. All mercury-containing items can generally be delivered to the Naval Air Station for disposal as a hazardous waste.

Caulking

In general, caulking is typically not considered a hazardous waste. In this case, it can be disposed of as regular construction debris in a dumpster. However, some caulking can have hazardous constituents. The contractor must check the manufacture safety data sheet (MSDS) to determine if a hazardous constituent exists. If so, it cannot be put in the dumpster. This type of caulking should be removed for reuse from the Naval Air Station. If it cannot be removed for some reason, this type of caulking must be allowed to completely dry in the tube before placing in the dumpster. It cannot go into the dumpster in a wet condition. If it cannot be removed and will not dry completely, it must be disposed of as a hazardous waste.

Oil-based paints

Any partially used can of paint should be taken off base if being reused. If it cannot be taken off base for reuse and there is not much paint left in the can, it may be allowed to dry and be disposed of as regular construction debris. However, it must be COMPLETELY dry before putting into a dumpster. No wet paint may be put in a dumpster at any time. If there is too much paint and it will not dry completely, the paint must be disposed of properly. In most cases, it is likely to be hazardous waste. It should be delivered to the Naval Air Station for disposal.

Latex Paint

Any partially used can of paint should be taken off base if being reused. If it cannot be taken off base for reuse and there is not much paint left in the can, it may be allowed to dry and be disposed of as regular construction debris. However, it must be COMPLETELY dry before putting into a dumpster. No wet paint may be put in a dumpster at any time. If there is too much paint and it will not dry completely, the paint must be disposed of properly. Although this type of paint is not likely to be hazardous waste, it cannot be put into a dumpster in a wet condition. It should be delivered to the Naval Air Station for disposal.

Latex paint containing mercury

These are generally prohibited in any construction contract at Naval Air Station Pensacola. If they are encountered for any unusual reason, however, any partially used can of paint should be taken off base if being reused. If it cannot be taken off base for reuse, it must be disposed of as hazardous waste. It must be delivered to the Naval Air Station for disposal.

Paint containing lead

These are generally prohibited in any construction contract at Naval Air Station Pensacola. If they are encountered for any unusual reason however, any partially used can of paint should be taken off base if being reused. If it cannot be taken off base for reuse, it must be disposed of as hazardous waste. It must be delivered to the Naval Air Station for disposal.

Lead-contaminated paint chips

Construction debris containing lead paint must not exceed 5mg/L using TCLP method for complete waste stream. Here are the alternatives for disposal:

- If a test is done prior to demolition that shows lead paint debris (as a part of total waste) is less than 5mg/L, then contractor may dispose of debris as non-hazardous waste.
- If paint chips (as a part of the total waste) will exceed 5mg/L, then put waste in 55- gal drum and store in satellite accumulation area. Within 3 days of being filled, drum must be delivered to Naval Air Station Pensacola and disposed of as hazardous waste.
- The Naval Air Station may use “process knowledge” to determine that waste stream will contain less than 5mg/L. NAS Environmental must make determination that total lead content of debris will be less than 5mg/L. They can be contacted at (850) 452-4611 X 111 (Tom Kelley).

Contractor will typically be provided test results of paint in specifications. Contractor still must meet all OSHA requirements for removal of lead paint EVEN IF the lead paint is considered to be below the 5mg/L threshold for hazardous waste.

Paint thinners

Most paint thinners will generally be considered hazardous waste. These paint thinners will typically include methylene chloride. Contractor should reuse this paint thinner and remove from the Naval Air Station. If this paint thinner must be disposed of, it must be delivered to the Naval Air Station and disposed of as a hazardous waste.

Chemical paint strippers

Any removal of paint by chemical means is likely to generate hazardous waste. All rinse liquids from strip processes (involving listed waste) is hazardous waste no matter what the concentration. Paint strippers typically include the listed constituent methylene chloride. Contractor must drum up all chemical stripping rinsate in 55 gal drums and treat as hazardous waste. This chemical stripping rinsate must be delivered to the Naval Air Station and disposed of as a hazardous waste.

Rags contaminated with solvents

A rag should generally be reused as much as possible. If a rag comes in contact with a listed waste, the contractor can remove it from site and have it cleaned by commercial source. Rag can be reused once it is cleaned since it is not a “waste.” If contractor does

not want to remove the rag from the site and have it cleaned, rag must be treated as hazardous waste and delivered to the Naval Air Station for disposal.

If solvent is used (which usually has listed constituent), then the rag must be reused as much as possible and ultimately cleaned by a commercial source or turned in to Naval Air Station to be disposed of as a hazardous waste. Generally, if there is dry paint (only) on the rag, it may be disposed of in a dumpster as regular construction debris. However, this only applies to certain types of oil or latex paint. If there was any lead or mercury in the paint, it becomes a hazardous waste even if it's dry. It must therefore be delivered to Naval Air Station and be disposed of as a hazardous waste.

Gasoline

Generally, contractors will not be permitted to store gasoline on site. In unusual situations where this is being permitted, contractors must have 125% secondary containment associated with the gasoline storage tank. Contractor must have some method for removing rainwater from secondary containment. If a spill occurs, contractor shall report to NAS Environmental immediately (850-452-4611 X 111). Contractor will clean up by removing soil and delivering to Naval Air Station for disposal as hazardous waste.

Aerosol cans

Generally, contractor must reuse aerosol cans. If they cannot be reused, contractor must be delivered to the Naval Air Station for disposal as a hazardous waste.

Solvents for cleaning and degreasing

Generally, contractor must reuse solvents. If they cannot be reused, contractor must check constituents. Generally, solvents that cannot be reused will be a hazardous waste. These solvents must be delivered to the Naval Air Station for disposal as a hazardous waste.

Solvent-based adhesives and glues

Generally, contractor must reuse adhesives and glue. If they cannot be reused, contractor must check constituents. Generally, adhesives and glue that cannot be reused will be a hazardous waste. These adhesives and glue must be delivered to the Naval Air Station for disposal as a hazardous waste.

Pesticides

Generally, contractor must reuse pesticides. Naval Air Station Pensacola will not allow these to be disposed of as hazardous waste. They must be removed from the base.

Brushes

Brushes with Latex paint may be washed in a sink at the Naval Air Station and reused. Brushes with oil paint MUST NOT be washed and cleaned in sink. Contractor must use solvent to clean. If the solvent has hazardous constituents, must take off base (for reuse) or be delivered to the Naval Air Station for disposal as a hazardous waste.

Batteries

Batteries should generally be recycled. Types of batteries that have recycling facilities available:

- Lead-acid wet cells
- Sealed lead-acid
- Nickel-cadmium

The batteries should be collected and stored out of the weather in a manner that preserves their casing integrity. If the batteries cannot be recycled and cannot be reused, they must be delivered to the Naval Air Station for disposal as a hazardous waste

Generator Status and Requirements

Once a hazardous waste determination has been made, a generator must determine the rate at which the hazardous waste is generated. Based upon the amount of hazardous waste that is generated in any one month, the regulations a generator is required to comply with is decided. There are three categories: Conditionally Exempt Small Quantity Generators, Small Quantity Generators, and Large Quantity Generators.

Small Quantity Generators and Large Quantity Generators are required to notify EPA of their hazardous waste activity, and then receive an EPA Identification number. This number is used to track all waste that is produced by that generator.

Conditionally Exempt Small Quantity Generators (CESQG) 40 CFR 261.5.

CESQG's generate less than 100 kilograms of HW per month and less than 1 kilogram of acute HW (such as some pesticides, toxins or arsenic and cyanide compounds) per month. Many wastes that are recycled are included in this quantity determination.

1. Perform HW determination (§262.11).
2. Cannot accumulate > 1000 kg at any time.
3. Ensure delivery of HW to a proper recycling facility or TSDF.
4. Keep records documenting proper disposal (FAC 62-730).

Small Quantity Generators (SQG) 40 CFR 262.

SQG's generate 100 - 1000 kilograms of HW per month. Many wastes that are recycled are included in this quantity determination.

1. Obtain a FDEP/EPA ID Number (§262.12).
2. Use manifest system (unless there is a reclamation agreement pursuant to §262.20(e)), and ship only to a permitted facility (262, Subpart B).
 - o A reclamation agreement is an agreement between the generator and a transporter which states the frequency, volume, type, and destination of waste that will be picked up from the generator by a transporter who uses his own vehicles to transport the waste to the final TSD.
3. Never exceed the 6000 kg accumulation/180 day storage time limit.
4. Emergency Planning:
 - a) Have at least one employee or a designee with authority as Emergency Coordinator (EC) on 24-hour call.
 - b) Next to the telephone, post
 - (i) the EC name and phone number;
 - (ii) fire department's number;
 - (iii) location of fire extinguishers; spill control equipment/material, and fire alarm (if any).
 - c) Follow emergency procedures in §262.34(d)(5), including taking necessary steps to address spills and fires, and notifying the National Response Center (24-hour number: 800/424-8802) and the State Warning Point (850/413-9911).
 - d) Upon request, the FDEP will provide contingency plan guidance if the facility wishes to develop a more comprehensive emergency plan than required of SQGs.
5. Training of personnel regarding proper HW handling and emergency response [§262.34(d)(5)(iii)].
6. Keep records (§262.44), including manifests, test results, etc., a minimum of three (3) years.
7. If tanks are used for management of HW, meet the tank requirements of §265.201. This includes daily and weekly inspections, required maintenance, spill response and closure standards.
8. Meet the following requirements under III -- LQG Requirements, below: Items 1, 2, 4, 5, 6, 12 to 15, 17, and 22.

NOTE:

9. If a SQG fails to meet applicable requirements, the full generator standards (and possibly TSDF standards) may apply.

Large Quantity Generators (LQG) 40 CFR 262.

LQG's generate 1000 kilograms or more of HW per month or 1 kilogram or more of acute HW (such as some pesticides, toxins or arsenic and cyanide compounds) per month. Many wastes that are recycled are included in this quantity determination.

1. Perform HW determination (§262.11), including LDR waste analyses (§268.7).
2. Obtain a FDEP/EPA ID number (§262.12).
3. Use manifest system, and ship to a permitted facility (262, Subpart B). State rules require the generator to complete areas D, F, H, I, K, O, Q, R and T on the form in

- addition to the other requirements.
4. Meet pre-transport requirements for packaging, labeling, marking and placarding (262 Subpart C).
 5. Meet satellite accumulation rules (§262.34(c)). Close and label these containers. (Satellite accumulation means that you are allowed to have up to 55 gallons of waste at or near the point of generation for longer than the normal accumulation time period, as long as the container is under the control of the operator, labeled with the words "Hazardous Waste" and kept closed.)
 6. Label containers and tanks with the words "Hazardous Waste" and label containers with accumulation start dates (§262.34(a)).
 7. Do not store HW > 90 days (§262.34(b)).
 8. Keep all records (§262 Subpart D) for at least three (3) years (including manifests, test data, biennial reports, etc.).
 9. File a biennial report for HW shipped off site (FAC 62-730.160).
 10. File exception report for late or missing manifests from the designated facility (§262.42).
 11. Meet personnel training requirements, including documentation of training (§265.16).
 12. Maintain and operate the facility in a clean, safe manner (§265.31).
 13. Emergency equipment (§265.32).
 - a) telephone or hand-held two-way radio;
 - b) internal communication or alarm system;
 - c) fire and spill control equipment (e.g. fire extinguishers, hoses, sprinklers, etc.);
 - d) neutralizing agents, spill adsorbents, overpack drums, standby 55-gallon drums, etc.;
 - e) test and maintain the emergency equipment (§265.33).
 14. Maintain adequate aisle space for evacuation, inspecting drums, etc. (e.g. no less than three (3) feet) (§265.35).
 15. Attempt to make arrangements with local fire and police departments, hospitals, and emergency response contractors/equipment suppliers, with regards to emergency arrangements, hazards of materials handled, layout of facility, etc. (§265.37).
 16. Have a contingency plan meeting the requirements of 265 Subpart D. Upon request, FDEP will provide contingency plan guidance. Emergencies that require implementation of the contingency plan must be reported to FDEP. Updated contingency plans must be distributed when facility conditions or emergency coordinators change.
 17. Containers (e.g. drums, cans, etc.) must be kept closed and in good condition, inspected at least weekly, be compatible with the HW stored, and separated from other incompatible wastes (e.g. keep cyanides away from acids) (265 Subpart I). Records must be kept of these inspections (FAC 62-730.160).
 18. Ignitable or reactive HW must be stored at least fifty (50) feet from the facility's boundary line (265 Subpart I).
 19. Tanks must meet the requirements of 265 Subpart J (structural integrity; containment and detection of releases; inspections; response to leaks or spills; operating requirements; closure and post-closure care; special requirements for

- ignitable, reactive and/or incompatible wastes; waste analysis and trial tests).
20. Special cautions (including "no smoking" signs) are required for ignitable or reactive wastes (§265.17).
 21. Security (e.g. a locked fence) and bermed containment areas (with roof and impermeable floor) for HW storage areas are strongly recommended.
 22. A Land Disposal Restrictions (LDR) Certification or Notification must accompany the initial manifest for a restricted waste. Generators who treat waste to meet land disposal restrictions must submit a waste analysis plan to FDEP (§268.7).
 23. Meet applicable air emission standards under 40 CFR 265 Subparts AA, BB and CC.
- It is the facility's responsibility to comply with Occupational Safety & Health Administration (OSHA) worker safety and protective clothing rules; fire codes; Florida's Right to Know Law; Superfund Amendments and Reauthorization Act (SARA); etc.

vii

ALL NASP REGION INSTALLATIONS ARE LARGE QUANTITY GENERATORS, AND ALL CONTRACTORS ARE REGULATED AS LQGs WHILE WORKING ON-BASE!

Hazardous Waste Disposal

When it becomes time for hazardous waste to be sent for proper disposal, a generator must use proper transporters who have notified EPA of their transportation activities. You can ask for a transporter's EPA ID number to determine if they have properly notified. In Florida, all HW transporters are required to carry liability insurance with coverage of at least one million dollars. They are also required to provide proof of their insurance to the FDEP on a yearly basis or they will have their transporter status revoked.

Hazardous waste is shipped on a Uniform Hazardous Waste Manifest (EPA Form 8700-22 and 8700-22a) to a permitted treatment, storage or disposal facility. These facilities have undergone rigorous and costly permitting processes to receive approval from EPA and their host state to be able to accept hazardous waste. Florida does not have any commercial permitted hazardous waste disposal facilities, but does have a few commercial facilities that are permitted to treat or recycle hazardous waste. If you are not sure about a transporter or TSD, always call your local FDEP office for more information.

Reporting Requirements for Hazardous Waste

Reporting requirements for hazardous waste management vary depending upon the generator's status. To view the specific requirements for a CESQG, SQG, or LQG, read the section, "Generator Status."

What Do Regulators Look for During Inspections?

Records

The following are various records that facilities are either specifically required to keep, or are supporting documentation that facilities should keep to prove their waste status:

- EPA ID Number -- Number you receive from EPA after notifying the agency that you manage or generate hazardous waste. Sometimes facilities use the wrong number without realizing it. Make sure you always double check that you have all of the numbers correct on your paperwork.
- HW Determinations -- Material safety data sheets, analytical results, waste profiles, process knowledge descriptions (as built drawings, equipment/process manuals, etc.)
- Disposal receipts -- manifests, land disposal certifications, contractual agreements. Manifests are required to be maintained for three years, land disposal certifications for five.
- Biennial reports are required to be submitted to EPA every two years to document the amount of waste generated during the previous year. These are required to be maintained for three years.
- Training records need to document the course content, the individual's position description and the individual's attendance at the course. They need to specifically address hazardous waste, not just emergency response, HAZMAT or safety issues. Training records must be maintained for three years.
- A contingency plan is a detailed document that gives specific information regarding the appropriate actions that should be taken in the event of an emergency involving hazardous waste.
- Arrangements with local authorities means a written acknowledgement from the emergency personnel that they are familiar with your operations and are agreeable and able to provide appropriate response services

Storage and Collection of Hazardous Waste

If a container is labeled hazardous waste, it must meet the criteria of the hazardous waste regulations. The containers must be:

- In good condition
- Properly stored to prevent leakage
- Closed at all times

- Labeled with the words “Hazardous Waste”
- Marked with the accumulation start date
- Inspected weekly
- Within accumulation timeframes
- In adherence with the 50 foot rule

NASP Region environmental personnel are able to assist contractors in determining hazardous waste streams generated at jobs. If a container holds hazardous waste, it must be kept closed at all times, unless waste is being added to it or removed from it. Then it must be closed when finished. Funnels are not allowed to remain in the top of a drum unless they are the type of funnel which screw into the bung and are equipped with a tightly closing spring lid. Check with NASP Region personnel to determine if such a funnel would be allowed first.

Unless a container is in a satellite accumulation area, the accumulation start time begins from the moment that the first waste is put into the container. A satellite accumulation area (SAA) is allowed to house up to 55 gallons of waste at the point of generation, under the control of the operator. If any of these conditions are not met, then the container becomes fully regulated. Once the 55-gallon requirement is met, the container must be dated and placed into the hazardous waste accumulation area within 72 hours. (Some inspectors interpret this regulation to mean that 55 gallons of each wastestream can be accumulated in any SAA, but others feel it should only be a total of 55 gallons of all wastestreams. Get to know your inspector and find out what is expected.)

Preparedness and Prevention

In case of an emergency, any facility should have a plan detailing how to respond appropriately. In order to properly prepare for and respond to an emergency, a facility needs:

- Internal communications equipment
- A method of contacting emergency response personnel
- Fire and spill control equipment tailored for types of waste in the vicinity
- Adequate aisle space between containers to allow for inspection of leakage
- Arrangements with local authorities
- Proper housekeeping
- “No smoking” signs

Inspectors look for all of these things to make sure that the likelihood of having an emergency situation is minimized, but also that the proper equipment is in place to properly respond. Because all of the equipment in the world will do no good if people are not trained in its use, inspectors many times will address questions to employees to determine if they know the correct action to take in the event of a hazardous waste release or emergency.

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites for Further Solid Waste Information

- US Environmental Protection Agency
<http://www.epa.gov>
- Florida Department of Environmental Protection
<http://www.dep.state.fl.us>
- University of Florida Department of Environmental Engineering Sciences
<http://www.enveng.ufl.edu/resrch/research.htm>
- Association of State and Territorial Solid Waste Management Officials
<http://www.astswmo.org/>
- Air and Waste Management Association
<http://www.awma.org/>
- Solid Waste Association of North America
<http://www.swana.org/>
- Institute of Scrap Recycling Industries
<http://www.isri.org/>
- The Environmental Industry Interactive website
<http://www.envasns.org/>

Web Sites for Further Hazardous Waste Information

- US Environmental Protection Agency
<http://www.epa.gov/rcraonline>
- Florida Department of Environmental Protection
<http://www.dep.state.fl.us>
- The Construction Education Center
<http://constructioneducation.com>
- Association of State and Territorial Solid Waste Management Officials
<http://www.astswmo.org/>
- Air and Waste Management Association
<http://www.awma.org/>
- Solid Waste Association of North America
<http://www.swana.org/>
- The Environmental Industry Interactive website
<http://www.envasns.org/>

CONTRACTOR CHECKLIST

- ❑ Fluorescent bulbs: Generally, these have mercury ballasts and shall be disposed of as hazardous waste.
- ❑ Caulking: Generally, caulking can be allowed to dry to and disposed of as regular construction debris.
- ❑ Oil-based paints: Reuse as much as possible. Otherwise, allow to dry and dispose as regular construction debris. Half-empty cans that are waste must be disposed of as hazardous waste.
- ❑ Latex Paint: Reuse as much as possible. Otherwise, allow to dry and dispose as regular construction debris. Half-empty cans that are waste will not be hazardous but cannot be put in the dumpster.
- ❑ Lead-contaminated paint chips: If less than 5mg/L of total waste, dispose as regular waste. If more than 5mg/L, put in 55 gal drums and dispose as hazardous waste.
- ❑ Paint thinners: Reuse as much as possible. Any waste will generally be disposed of as hazardous waste.
- ❑ Chemical paint strippers: Reuse as much as possible. Any waste will generally be disposed of as hazardous waste.
- ❑ Rags contaminated with solvents: Reuse as much as possible. Any waste rags will generally be disposed of as hazardous waste.
- ❑ Gasoline: Provide 125% secondary containment.
- ❑ Aerosol cans: Reuse as much as possible. Any waste cans will generally be disposed of as hazardous waste.
- ❑ Solvents for cleaning and degreasing: Reuse as much as possible. Any waste solvent will generally be disposed of as hazardous waste.
- ❑ Solvent-based adhesives and glues: Reuse as much as possible. Any waste glue/adhesive will generally be disposed of as hazardous waste.
- ❑ Pesticides: Reuse pesticide. Should not dispose.
- ❑ Brushes: Latex paint can be washed in sink. Oil-based must use solvent to clean. Follow rules associated with solvent.
- ❑ Batteries: Generally they should be recycled. Otherwise, they must be disposed of as hazardous waste.
- ❑ Satellite Accumulation Areas
 - 1) Must be “at or near” the area of generation.
 - 2) Accumulation Area must be clearly labeled.
 - 3) Must be under control of Haz Waste person.
 - 4) Drums must be clearly marked/one 55 gal drum per waste stream.
 - 5) Drums must be closed at all times.
- ❑ Drums: good condition/label/closed with lid
- ❑ Training Records: all employees/accurate/up to date

Air

When you think of air quality, do you picture blue skies? When the word “pollution” is mentioned, do you envision factories belching smoke toward the heavens? It would seem that if the air looks good and doesn’t have smog in it, then it must be safe to breathe. Unfortunately, there are many air pollutants that we may not see or smell but are all around us and are dangerous to our health. Current air quality regulations are designed to protect human health from all air pollutants: the ones we can see, and the ones we cannot.

The first regulations that attempted to improve air quality in the United States were implemented by the federal government in 1955, as the Clean Air Act. Since those original requirements were made law, the US population has grown tremendously, and we’ve changed from being a society that relies on public transportation and *maybe* owning a car, to having at least one car for every driver in the house. In Florida, since 1955, our society has changed so that we commute to farther to work and school, we use more energy for household and office equipment and we air-condition everything. Because of the huge impact that our individual activities now have on our air quality, the regulations have been changed accordingly. Industries are under strict requirements to both clean up their emissions and manufacture products that are less detrimental to our air quality. Air quality regulations no longer apply only to huge factories, but also to small businesses and individuals.

US EPA Applicable Laws and Regulations

In 1970, the Clean Air Act authorized EPA to establish National Ambient Air Quality Standards (NAAQS). These standards were designed to protect human health from air emissions from many sources, including area, stationary and mobile sources. In 1990, the CAA was amended to better address problems such as acid rain, ground-level ozone, stratospheric ozone depletion and air toxics.^{viii}

Florida Applicable Laws and Regulations

The State of Florida administers its air quality program through FDEP. The following regulations are either equivalent to or stricter than the federal regulations listed under the CAA:

- Chapter 62-4, Florida Administrative Code (F.A.C.) Permits
- Chapter 62-204, F.A.C. Air Pollution Control – General Provisions
- Chapter 62-210, F.A.C. Stationary Sources – General Requirements
- Chapter 62-212, F.A.C. Stationary Sources – Preconstruction Review
- Chapter 62-213, F.A.C. Operation Permits for Major Sources of Air Pollution
- Chapter 62-214, F.A.C. Requirements for Sources Subject to the Federal Acid Rain Program
- Chapter 62-242, F.A.C. Motor Vehicle Emissions Standards and Test Procedures
- Chapter 62-243, F.A.C. Tampering with Motor Vehicle Air Pollution Control Equipment
- Chapter 62-252, F.A.C. Gasoline Vapor Control
- Chapter 62-256, F.A.C. Open Burning and Frost Protection Fires
- Chapter 62-257, F.A.C. Asbestos Program
- Chapter 62-281, F.A.C. Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling
- Chapter 62-296, F.A.C. Stationary Sources – Emission Standards
- Chapter 62-297, F.A.C. Stationary Sources – Emissions Monitoring

General Definitions

Rule 62-204.200, F.A.C. defines the following:

- “Air Pollutant” -- Any substance (particulate, liquid, gaseous, organic or inorganic) which if released, allowed to escape, or emitted, whether intentionally or unintentionally, into the outdoor atmosphere may result in or contribute to air pollution.
- "Air Pollution" -- The presence in the outdoor atmosphere of the state any one or more substances or pollutants in quantities which are or may be harmful or injurious to human health or welfare, animal or plant life, or property, or unreasonably interfere with the enjoyment of life or property, including outdoor recreation.
- "Particulate Matter"
 - (a) Regarding concentrations in the atmosphere, particulate matter means any airborne finely divided solid or liquid material.
 - (b) Regarding emissions, particulate matter means all finely divided solid or liquid material, other than uncombined water, emitted to the atmosphere as measured by applicable reference methods, or an

equivalent or alternative method, specified in 40 CFR Part 60, Appendix A, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

Permit Requirements

Numerous types of permits are issued by FDEP for air pollution sources. The type of permit an operation may need depends upon the type of pollutant, volume emitted and frequency of the emission. NASP Region has focused on reducing emissions from all installation activities that emit pollutants, and strives to meet air quality standards throughout the bases.

Any permit issued will describe the permitted activity, any required pollution control equipment and practices, compliance testing requirements and record-keeping and reporting requirements.

Stationary Sources

Boilers: Rule 62-210, F.A.C. regulates boilers that are defined as an enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam or any other medium. Because fossil fuels and many other fuels contain pollution-causing chemicals, the emissions from boilers are regulated to decrease their negative impacts on air quality.

Paint booths: Emissions from paint booths contain many pollutants that can be removed with filters installed on an air exhaust system. Used filters must be tested to determine if they are hazardous or non-hazardous waste, and managed appropriately for disposal. (See Section 3 regarding hazardous waste management requirements.)

Volatile Organic Compounds (VOCs) from painting may be minimized by using low VOC paints and solvents and by using high volume-low pressure paint guns. The fumes from painting should be exhausted from the paint booth through a stack that is high enough to give good dispersal.

Sand-blasting booths: Blast media such as sand, walnut shells, or dry ice is directed at solid surfaces under pressure so that the force of the blast removes the outer coating of the surface through abrasion. Many times, the coating being removed contains hazardous waste constituents, such as lead, cadmium or chromium, among other chemicals. The action of the abrasive cleaning also causes dust that may be a nuisance or may spread hazardous pollutants on nearby surfaces.

Media blasting activities should always be conducted in areas designed to contain the media and control the emissions. Temporary screening may be used for short-term projects. Needle blasters with vacuum attachments can control dust and minimize the amount of waste blast media. Disposal of spent blast media must be done in accordance

with applicable solid and hazardous waste management guidelines. Check with your FDEP Air Program inspector to find out what special permitting requirements may be necessary prior to beginning an abrasive cleaning job.

Asbestos

Asbestos is a building material that requires extremely careful handling practices. It has been proven to be a cause of asbestosis, lung cancer and mesothelioma. There is no safe level of exposure, and therefore the regulations are strict in their requirements to protect human health.

Asbestos management is regulated by several agencies, each working in a different capacity:

- EPA -- rules protecting the surrounding environment (40 CFR 61, subpart M, NESHAP) & schools (ASHERA)
- OSHA -- rules protecting workers -- general industry and construction (29 CFR 1910)
- Florida Department of Business and Professional Regulation (DBPR) -- licensing contractors & consultants (Chap. 469 F.S.)
- FDEP -- notification & fees (Chap. 62-257, F.A.C.)

Who Needs to Know About Asbestos?

- Owners of property both public and private
- Architects and Engineers who design construction projects
- Prime Contractors
- Subcontractors, including demolition, mechanical, flooring, roofing, etc.
- Asbestos abatement contractors & consultants

Who is Responsible?

- Any person who owns, leases, operates, controls or supervises the facility being demolished or renovated, or
- Any person who owns, leases, operates, controls or supervises the demolition or renovation operation, or
- Both

What Kinds of Facilities are Affected?

- Commercial, industrial, institutional, public or residential structures, installations or buildings
- Condominium, apartment complexes, groups of more than four houses
- Ships
- Active or inactive waste disposal sites

- Excludes residential structures of four or fewer dwelling units

What Kinds of Projects are Involved?

- Demolition -- removing a load-bearing structural member, demolishing a structure, or intentionally burning a structure
- Renovation -- altering a facility or part of a facility, including the removal of asbestos

Asbestos Management Requirements

- Survey the structure to identify Asbestos Containing Materials (ACM)
- Notify FDEP if required
- Remove regulated asbestos containing material (RACM) before disturbing
- Dispose of ACM in approved landfills

Types of Asbestos-Containing Materials (ACM)

Building material containing 1% or more of asbestos as determined by Polarized Light Microscopy is ACM and is subject to regulations.

ACM which can be crumbled, pulverized or reduced to powder by hand pressure is friable and is RACM

- Category I non-friable ACM -- packings, gaskets, resilient flooring (VAT and sheet goods), asphalt roofing
- Category II non-friable ACM -- everything else, such as cement shingles, transite siding, pipe

Regulated Asbestos Containing Material (RACM)

A Florida Licensed Asbestos Contractor must remove RACM before anyone conducts any renovation or demolition work that might disturb it.

RACM is:

- Friable asbestos material
- Category I that has become friable or will be subjected to sanding, grinding, cutting, abrading
- Category II that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by forces expected to act on it during the course of demolition or renovation activities.

Some Asbestos-Containing Materials (ACM)

- Ceiling Texture
- Linoleum
- Ceiling tiles & lay-in panels
- Pipe wrap--air-cell, block
- Construction mastics
- Boiler insulation
- HVAC Duct Insulation
- Cement wall board
- Thermal paper products
- Vermiculite insulation
- Cement pipes
- Vinyl Asbestos Tile
- Wallboard
- Joint compound & skim coat
- Spray applied fireproofing
- Decorative plaster
- Roofing felts & flashings
- Cement shingles & siding
- Window Caulk

!!! WARNING!!!

You can still buy building materials that contain asbestos. Asbestos content does not have to be listed on the label on imported materials. "Imported" includes Canada. This means that every building must be surveyed regardless of age or date of last renovation.

What To Do If You Encounter Asbestos

IF YOU SUSPECT ACM, STOP WHAT YOU ARE DOING AND CONTACT NASP REGION ENVIRONMENTAL STAFF OR THE ROICC COORDINATOR IMMEDIATELY.

Surveys

- Thoroughly inspect (survey) the structure prior to commencement of demolition or renovation work.
- Survey must be conducted by a Florida Licensed Asbestos Consultant (Chap. 469, F.S.). License number should be included on survey.
- Surveys should include specific locations of each type of ACM, quantities of each type of ACM, asbestos content of each type of ACM, type of operation (renovation or demolition), identification of materials presumed to contain asbestos but not sampled and recommendations for proper removal or management of the ACM.
- Phase I Assessments usually do not include an Asbestos Survey.

- Findings will determine which notification and removal requirements of the regulations apply.

(OSHA presumes that suspect materials such as TSI, surfacing material, resilient flooring, roofing are asbestos-containing in buildings constructed prior to 1980, unless proven otherwise.)

Notification

- Notification is required for all demolitions, even if there is no asbestos-containing material in or on the structure
- Notification is required for removal of RACM if more than 260 linear feet of pipe wrap or 160 square feet of other types of materials are removed—asbestos removal is called a renovation
- FDEP Notification Form 62-257.900(1) -- fill out completely and sign
 - Mail to FDEP at least 10 working days before beginning work.
 - If start dates change send revised form (phone call if time is too short for mail)
 - If other information changes submit revised form.

Removal/Abatement -- RACM

- RACM must be removed by Florida Licensed Asbestos Abatement Contractor, or
- An employee of a government or private entity who has completed all training required by NESHAP, OSHA and AHERA conducting work solely for maintenance purposes involving less than 160/260 as long as that person is not available for hire, or
- Regular full-time employees of military facilities, manufacturing or utilities who have completed all required training, working in areas where access is restricted to authorized personnel on specific assignments, or
- An owner who lives in a single-family residence may personally remove asbestos but is required to sign disclosure form at Building Official's office.

Renovation/Abatement-Flooring

- VAT (vinyl asbestos tile) and Linoleum
- Licensure not required for flooring removal, provided (Chap. 469, F.S.):
 - Flooring is Category I non-friable and remains Category I non-friable throughout removal
 - Removal is performed according to OSHA standards
 - Written notice is submitted to FDBPR at least 3 days prior to removal
- OSHA requires workers to be trained in asbestos flooring removal

- Flooring must be removed substantially intact, no sanding, abrading, chipping, ripping, sawing
- Flooring must be kept wet during removal and packaging

Removal/Abatement Roofing

- Licensure not required provided (Chap 469)
 - Roofer is certified or registered under part 1 of Chap. 489, F.S.
 - On-site roofing supervisor has been trained in a FDBPR-approved asbestos roofing course
- Roofing material is removed wet and there are no visible emissions – NO DUST!
- Workers will not be exposed above PEL (OSHA permissible exposure limit) for asbestos

Renovation/Abatement - Cat II

- Licensed Asbestos Contractor (Chap. 469)
- Keep wet during removal
- Minimize breaking
- No sanding, abrading, sawing, crushing

Demolition

- Remove RACM prior to demolition
- Cat. I and Cat. II may be left in structure during demolition provided:
 - It is in good condition
 - It is not sanded, abraded, sawed or pulverized during demolition
 - It is kept WET during demo & loading
- Use rubber tired vehicles
- No compacting
 - If ACM becomes RACM, there must be a competent person trained in compliance with the asbestos regulations on site.

Disposal

- **RACM** – Dispose in a Class I or Class III landfill where it will be covered within 24 hours
 - In leak-tight, preferably clear bags or wrappings
 - Labeled with warning label and label showing site where generated and operator
 - Waste must be kept WET

- **Category I and Category II non-friable**

In Bags – Class I, Class III or C&D landfill

- Clear bags
- Waste shipment record marked non-friable
- WET

Not in bags, not mixed with C&D debris – Class I, Class III or C&D landfill

- Unload and place carefully to avoid crushing, etc.
- Waste shipment record marked non-friable

Loose, mixed with other C&D debris – C&D landfill

- Wet
- Unload carefully

Open Burning

- Florida Statutes prohibit open burning by commercial operations unless the Florida Department of Environmental Protection has determined there is no other feasible means of disposal.
- NASP Region prohibits open burning.

Refrigerants

Cooling system refrigerants, frequently referred to as "Freon," are regulated to protect stratospheric ozone. The refrigerant must not be vented into the air; it must be captured and can be recycled. Freon has become a valuable commodity. The regulations require that technicians working on refrigeration equipment be certified by EPA.

Unconfined Emissions of Particulate Matter

Dust, or “particulate matter emissions,” comes from many different sources at a construction/demolition site including:

- Vehicular movement
- Material conveying
- Sandblasting
- Wind erosion
- Demolitions
- Paint overspray

FDEP regulations require that reasonable precautions be taken to prevent such emissions. Some ways that emissions can be controlled is by adhering to the following management practices:

- Paving and maintenance of roads, parking areas and yards
- Applying water or dust suppressants (not oil) to control dust from demolition, roads, material storage piles
- Removing accumulated dirt or sand
- Landscaping
- Confining emissions from sandblasting or wet blasting
- Confining emissions from painting with curtains or roll/brushing rather than spraying

What Do Regulators Look for During Inspections?

Inspectors will ask to review permits, sample analysis results, applicable training records, and licenses of people performing regulated work that requires a license or training. The inspectors will compare notices with actual job conditions and observe overall housekeeping practices at the site. Any disposal receipts and documentation will be inspected. If the documents requested by inspectors are not available, then a time period will be set (usually 5 to 10 days) for submittal of the documentation to the inspector's office. Inspectors will inform you of problems they observe while on the job site and may suggest corrective measures. They will expect you to cease the non-compliance activity until you have taken corrective actions.

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

CONTRACTOR CHECKLIST

Asbestos

- ❑ Obtain and review asbestos survey of structure
- ❑ Appropriate notification made to FDEP 10 days prior to starting work.
- ❑ Company responsible for removal must have Florida Asbestos Contractor License
- ❑ Employees must have proper training
- ❑ Entire area must be enclosed in negative air pressure environment
- ❑ Employees must be suited up with respirators to prevent exposure
- ❑ Asbestos must be kept wet during entire process (including bagging)
- ❑ Asbestos must be double-bagged for disposal
- ❑ "Glove Bag" can be used for small amounts of asbestos. Pipe lagging, for example
- ❑ Proper paperwork for Disposal Facility
- ❑ Proper type of Disposal Facility (Class I landfill)

Refrigerants

- ❑ MUST NOT release to the open environment.
- ❑ Contractor required to put in approved containers and deliver to the Naval Air Station for recycling

Open Burning

- ❑ Not permitted at Naval Air Station Pensacola under any circumstances

Records

- ❑ Maintain current training records for all employees on site
- ❑ Keep current copies of all asbestos disposal receipts

Wetlands

Wetlands play many roles within the earth's ecosystems. They are invaluable in controlling floodwaters, recharging groundwater and filtering pollutants, as a habitat for waterfowl and other wildlife, a support for fisheries and sanctuaries for rare and endangered species and for their educational, recreational and aesthetic promise.

In Chapter 62-340, Florida Administrative Code, Florida wetlands are defined as those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

Major Federal Laws And Regulations

Clean Water Act (CWA) -- The Clean Water Act is actually an amendment to the original Federal Water Pollution Control Act of 1972. The CWA came into existence in 1977 and gave EPA the authority to set effluent standards on an industry basis and continued the requirements to set water quality standards for all contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source in navigable waters unless a permit (National Pollutant Discharge Effluent Standard or NPDES) is obtained. In 1987, the CWA was reauthorized to increase its focus to toxic substances, authorize citizen suit provisions, and fund sewage treatment plants (POTWs) under the Construction Grants Program. The CWA provides for the delegation by EPA of many permitting, administrative and enforcement aspects of the

law to state governments. In state with the authority to implement CWA programs, EPA still retains oversight responsibilities.^{ix}

Rivers and Harbors Appropriation Act -- Section 10 of the Rivers and Harbors Appropriation Act deals with construction of bridges, causeways, dams or dikes. Basic requirements of the Act are that no structure may be built over or through a navigable waterway without proper permission. The Act specifies which structures must be approved by the Department of Transportation, the Army Corps of Engineers or the State in which the waterway resides, accordingly.

Federal Agriculture Improvement and Reform Act (The Farm Bill) – Title III of the Farm Bill is dedicated to conservation practices as they apply to agricultural activities. This legislation is administered by the US Department of Agriculture.

Coastal Wetlands Planning, Protection and Restoration Act – This act is also known as the National Coastal Wetlands Conservation Grants. Administered by the US Fish and Wildlife Service, the legislation is designed to grant funds to coastal states in order to carry out coastal wetlands conservation projects.

Florida Applicable Laws And Regulations

Chapter 62-340, F.A.C. Delineation of the Landward Extent of Wetlands and Surface Waters

Chapter 18-21, F.A.C., F.A.C. Sovereignty Submerged Lands

Chapter 62-312, F.A.C. Dredge and Fill Activities

Chapter 62-330, F.A.C. Environmental Resource Permitting

General Description Of What Is Regulated

When designing a project in or near wetlands, a lot of thought should go into how the construction will take place. For instance, if working in a wetland, the type of equipment being used and how the equipment is to access the site must be considered. If dredging, the spoils must be properly managed. If filling, the quality of the fill and the origin of the fill must be known. If dewatering of the site prior to construction is necessary, then consideration must be given to how the water will be removed from the ground and where the water will be deposited. Many times, other impacts occur as a result of the project. For instance, when building a bridge, traffic must be rerouted while the project is under construction. A bridge construction project may have received all valid permits, but perhaps no one explored the possible impacts associated with the temporary bridge. Such a mistake could result in project delays, fines and other penalties.

Permit Requirements

Dredging, filling, construction or stormwater treatment activities conducted in, or over waters of the United States or waters of the State, including wetlands, may require a permit or other authorization from the Federal government and the State of Florida.

Although the forms serve as joint applications to most of the wetland regulatory agencies, joint PERMITS are not issued and you must receive all required permits or authorizations for any alteration of the waters of Florida from all applicable Federal, State, and local programs before beginning work..

Most of the agencies involved in the wetland resource regulatory process must evaluate applications within specified time frames. However, the efforts of permit applicants in providing complete, clear and adequately detailed information to the agencies will expedite the process and may play a large factor in the time needed to evaluate projects.

A meeting with the respective regulatory agencies to discuss project plans usually is helpful before submitting an application. A pre-application meeting can eliminate much time and effort spent planning a project that may not meet permitting standards.

Who To Check With About Wetland Delineations

- DEP is the primary permitting agency for the State. Rule 62-340, F.A.C. contains the methodology for identifying and delineating wetlands.
- The U.S. Army Corps of Engineers (Corps) is the permitting agency for the Federal government (except for bridges, causeways and effluent discharges). Section 404 of the Clean Water Act requires a permit from the U.S. Army Corps of Engineers for discharges of dredged or fill material into waters of the United States, including most wetlands.
- The five water management districts in Florida are St. Johns, Suwannee, Northwest, South Florida and Southwest Florida. NASP Region is located within the Northwest Water Management District area.
- Often permitting is a joint venture involving more than one regulatory agency.

Typical Projects That Impact Wetlands

- Building docks
- Preparing ground for building foundations

- Road and bridge building
- Land clearing
- Erosion
- Wastewater discharges
- Dewatering activities
- Pesticide application
- Spray irrigation of reuse water

Dredging and Filling Permits

On the federal level, these are issued by the Army Corps of Engineers. If the permit is for state jurisdictional wetlands, DEP or the Water Management District is the permitting agency.

General Protection Activities

Each project has its own characteristics, and conditions will vary with each site. Some general guidelines are:

1. If working directly in the wetlands, use mats or other materials that will prevent rutting of the soil.
2. Use turbidity control devices (silt screens) to prevent overspill of either soil or water into adjacent wetlands.
3. If dewatering, use turbidity screens, hay bales or other control devices to insure that the quality of water from the discharge meets state standards.
4. Mark the wetland boundary with flagging tape. This sets the limits of impact for the project and will help heavy equipment operators ensure that they do not impact wetlands with their machines.
5. Prior to bidding on a project, meet with the permit staff and review the terms and conditions of the permit.

What Do Regulators Look For During Inspections?

Generally, regulators will look at the quality and function of the wetlands as they relate to water quality and habitat. An inspector will specifically look for damage to wetland plants, site construction activities that will allow silt or turbidity problems, proper placement and maintenance of erosion control materials and overall compliance with permit conditions.

Web Sites for Further Information

- US Environmental Protection Agency
<http://www.epa.gov>
<http://www.epa.gov/owow/wetlands/>
- US Fish and Wildlife Service
<http://www.fws.gov/>
- US Department of Agriculture
<http://www.usda.gov/>
- US Army Corps of Engineers
<http://www.usace.army.mil/inet/functions/cw/>
- US Department of Transportation Federal Highway Administration
<http://www.fhwa.dot.gov/programs.html>
- Florida Department of Environmental Protection
<http://www.dep.state.fl.us>
- International Erosion Control Association
<http://www.ieca.org>

Stormwater

Stormwater is the runoff water that occurs during or after a rainfall event. Stormwater is considered a “nonpoint source” (NPS) of pollution. NPS pollution is regulated because often pollutants are carried with the rainwater into sensitive wetlands, surface water bodies or percolated through soil into the aquifer.

US Applicable Laws And Regulations

Clean Water Act (CWA) -- The Clean Water Act is actually an amendment to the original Federal Water Pollution Control Act of 1972. The CWA came into existence in 1977 and gave EPA the authority to set effluent standards on an industry basis and continued the requirements to set water quality standards for all contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source in navigable waters unless a permit (National Pollutant Discharge Effluent Standard or NPDES) is obtained. In 1987, the CWA was reauthorized to increase its focus to toxic substances, authorize citizen suit provisions, and fund sewage treatment plants (POTWs) under the Construction Grants Program. The CWA provided for the delegation by EPA of many permitting, administrative and enforcement aspects of the law to state governments. In state with the authority to implement CWA programs, EPA still retains oversight responsibilities.^x

Florida Applicable Laws And Regulations

The state of Florida has received delegation from EPA to enforce provisions of the CWA. The delegation means that an inspector from an appropriate Florida regulatory agency, usually the Department of Environmental Protection, can act on behalf of the EPA. Florida received delegation for NPDES regulation on October 22, 2000. The regulation duties are handled through the Bureau of Submerged Lands and Environmental Resources Permitting in Tallahassee, not in the individual FDEP district offices. The applicable state regulations listed in this part are not intended to be all-inclusive, but rather a good representation of the most probable state regulations that may apply for

construction activities. It is always good to establish a good rapport with regulators in your area so you can be familiar with whom to contact when questions arise.

- Chapter 62-25, F.A.C. Regulation of Stormwater Discharge
- Chapter 62-624, F.A.C. Municipal Separate Storm Sewer Systems
- Chapter 62- 301, F.A.C. Surface Waters of the State
- Chapter 62-302, F.A.C. Surface Water Quality Standards
- Chapter 62-620, F.A.C. Wastewater Facility Permitting
- Chapter 62-621, F.A.C. Generic Permits

Stormwater Permit Requirements

Any construction that creates a new stormwater discharge (e.g., buildings, parking, roads, etc.) will require a state stormwater permit. The permit must be obtained before construction begins. Submit the application to the Water Management District where the project is located. If the project is located in Northwest Florida, then submit the plan to the Florida Department of Environmental Protection. The following are examples of activities requiring permits:

- New buildings, including residential groups of more than four homes
- Road building, road paving, road widening
- Parking lot construction
- Regrading

The application should include:

- Notice of Intent to Use a New Stormwater Discharge Facility
- The fee (currently \$250)
- Grading/drainage plans – signed/sealed by a Professional Engineer including calculations
- Geotechnical report
- Erosion control plan

Erosion Control

Erosion control during the construction project is essential to prevent sediment and other pollutants from reaching the waters of the state through storm drains and direct run-off. The nature of construction sites creates a high potential for pollution, especially from erosion. Bare soil exposed to rain and wind for an extended period of time will find its way offsite unless properly controlled.

Off site impacts include:

- Sedimentation of drainage ditches, canals, pipes and stormwater treatment ponds
- Turbidity of surface waters

- Introduction of pollutants and nutrients to surface waters

Sedimentation of conveyances reduces their volume capacity and causes flooding. Sedimentation of stormwater treatment ponds reduces the required treatment volume and may impair the system. Turbidity of surface waters has negative biological impacts to aquatic organisms and may constitute a violation of state water quality standards.

Best Management Practices for Controlling Erosion

- Sequence construction to minimize the amount of disturbed area. This involves making the project a team effort among the planners, designers, contractors, permit reviewers and regulators.
- Install erosion controls such as silt fencing, hay bales, brush barriers, swales, grassed areas and temporary sediment traps.
- Maintain erosion controls:
 - 1.) Remove sediments that build up -- that way your control structures will remain effective
 - 2.) Inspect regularly, especially after storm events
 - 3.) Install additional controls as needed
- Water roads, material piles and exposed areas to reduce wind blown dust
- Protect storm drain inlets. Pollutants and nutrients attached to sediments can cause fish kills and/or algae blooms. Using “socks” to prevent stormwater from carrying sediment into the system can protect inlets. Captured sediments should be periodically removed and replaced on the site.
- Keep dirt from leaving the site through construction entrances. Keep adjacent streets free of dirt by picking up dirt and cleaning trucks before they leave the work site.

What Do Regulators Look For During an Inspection?

Inspectors will look at erosion control fencing to make sure that it is properly installed and maintained. If there are water bodies nearby, they will be inspected to see if any visible turbidity exists. Storm drains will be inspected to determine if significant amounts of sediments have been allowed to wash into them. Inspectors will look at the overall stability of the site to evaluate the potential for sedimentation.

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites For Further Stormwater Information

- USEPA official website
<http://www.epa.gov>
- Local Government Environmental Awareness Network
<http://www.lgean.org>
- Florida Department of Environmental Protection
<http://www.dep.state.fl.us>
- FDEP NPDES stormwater delegation
http://www.dep.state.fl.us/water/slerp/nonpoint_stormwater/npdes/npdes.htm
- Water Management Districts
 - St. Johns River WMD
<http://sjr.state.fl.us/>
 - South Florida WMD
<http://www.sfwmd.gov/>
 - Southwest Florida WMD
<http://www.swfwmd.state.fl.us/>
- Florida Association of Stormwater Utilities
<http://www.fasu.org/>
- International Erosion Control Association
<http://www.ieca.org>
- Stormwater online publication
<http://www.stormh2o.com>

Storage Tanks

This section provides information regarding aboveground storage tanks (AST) and underground storage tanks (UST). The greatest potential hazard from a leaking tank is that petroleum or other hazardous substances can seep into the soil and contaminate groundwater, which is the main source of drinking water for most Floridians. A leaking tank can present other health and environmental risks, including the potential for fire and explosion. Until the mid-1980s, most USTs were made of bare steel, which is likely to corrode over time and allow UST contents to leak into the environment. Faulty installation or inadequate operating and maintenance procedures also can cause tanks to release their contents into the environment. Congress banned the installation of unprotected steel tanks and piping beginning in 1985.

US EPA Applicable Laws and Regulations

EPA has established requirements for USTs and ASTs under Subtitle I of RCRA. These regulations set minimum standards for new tanks and require owners of existing tanks to upgrade, replace or close them. The UST regulations are divided into three sections: technical requirements, financial responsibility requirements and state program approval objectives.

The federal regulations exempt the following USTs from the requirements:

- Farm and residential tanks of 1,100 gallons or less capacity holding motor fuel used for noncommercial purposes
- Tanks storing heating oil used on the premises where it is stored
- Tanks on or above the floor of underground areas, such as basements or tunnels
- Septic tanks and systems for collecting storm water and wastewater
- Flow-through process tanks
- Tanks of 110 gallons or less capacity
- Emergency spill and overfill tanks

EPA recognizes that, because of the large size and great diversity of the regulated community, state and local governments are in the best position to oversee USTs. Subtitle I of RCRA allows state UST programs approved by EPA to operate in lieu of the federal program, and EPA's state program approval regulations set standards for state programs to meet.

ASTs are also regulated by EPA under the Oil Pollution Act of 1990, known as "OPA 90." OPA 90 contains provisions for large storage tanks, especially those that are involved in piping material between tanks and vessels. In Region IV, the region of EPA that governs Florida, the AST program is administered through the Office of Emergency Response. AST regulations include requirements for EPA's Spill, Prevention, Control and Countermeasure (SPCC) requirements (40 CFR, Part 112). SPCC applies to facilities with a single AST with storage capacity greater than 660 gallons, or multiple tanks with a combined capacity greater than 1,320 gallons. SPCC requires procedural and contingency plans as well as various technical requirements, such as corrosion protection.

Florida Applicable Laws and Regulations

In 1983, Florida passed legislation, adopted rules and developed a program for the regulation of underground and aboveground storage tank systems. DEP has a very active petroleum contamination prevention and cleanup program and some of the most stringent rules in the country.

Chapter 62-761, F.A.C. provides standards for underground storage tank systems having individual storage tank capacities greater than 110 gallons, and aboveground storage tank systems having individual storage tank capacities greater than 550 gallons.

Leak prevention is an important part of Florida's program. DEP's UST and AST rules require that all new and replacement storage tank systems have secondary containment. The rules also establish deadlines for owners of existing storage tank systems to replace their systems with those that have secondary containment. DEP has agreements with every county in the state to have counties perform inspections and pursue enforcement for violations.

General Description

The following information applies mainly to tanks that contain material or product. Any tanks that contain hazardous waste are regulated under RCRA, Subpart J, and are subject to requirements that are much more stringent.

Aboveground Tanks

- Register tanks greater than 550-gallon capacity with FDEP within 30 days of putting product into tank.
- A verbal or written notice shall be provided to the County or FDEP
 - At least 30 days prior to installation or upgrading

- Within 48 hours of initiating installation or upgrading storage tank system
- New systems, including secondary containment, overfill protection, dispenser liners and integral piping shall be installed in accordance with FDEP Rule 62-761.500, F.A.C.

No special contractor license is required to install, remove or perform maintenance work on aboveground tank systems (includes associated underground piping).

"Secondary containment" means a system that is used for release prevention, and may include one or more of the following devices:

1. A double-walled tank
2. An external liner, or
3. A system or structure constructed such that accidental releases from a tank would be collected by a drainage system within the system or structure and routed to a permitted wastewater treatment system, plant recirculating process system or alternative containment system approved by the Department in accordance with Rule 62-761.850, F.A.C.

Underground Tanks

Register tanks greater than 110 gallons capacity with FDEP within 30 days of putting product into the tank.

The contractor installing the underground storage tank system or removing an underground storage tank or associated piping must have a Pollutant Storage System Contractor license certified by the Department of Business and Professional Regulation.

Notice Requirements for USTs

- A verbal or written notice shall be provided to the County or FDEP
 - At least 30 days prior to installation or upgrading
 - Within 48 hours of initiating installation or upgrading
 - At least 10 days before an internal inspection of an underground storage tank, an API 653 internal inspection, a change in service status, closure or closure assessment.
- New systems including secondary containment, overfill protection, dispenser liners, piping sumps and integral piping shall meet the performance requirements of FDEP Rule 62-761.500, F.A.C. Typically, the notice is provided so that an inspector can be at the event that is being noticed. If a notice is not made and an inspector is not given the opportunity to be present during the activity, a violation may occur, and possibly, penalties assessed.

Tank activities at NASP installations are usually noticed to proper agencies by the NASP Environmental staff, but it is always a good idea for the contractor to ask if the notice was made.

Who To Check With If You Encounter a Tank

Call NASP Environmental immediately if you encounter a tank unexpectedly. Do not attempt to open it or determine its contents.

Discharge From Tanks

Always contact NASP Environmental immediately upon discovery of a discharge of any volume. Improper handling of fuel can result in serious injury or death caused by fire, explosion or asphyxiation. Fuel released into the environment can contaminate soil and groundwater, resulting in costly cleanups. Contaminated groundwater supplies may sicken people and animals that unknowingly drink the polluted water. Gasoline vapors are harmful to human health even at low concentrations and are potentially dangerous at high concentrations. Some very simple steps can alleviate many of these problems.

Federal regulations under 40 CFR Section 280.30 describes actions that UST owners and operators must take to prevent accidental spills and overfills. When a delivery is being made to fill an UST, the owner and operator has the responsibility to:

- Ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank **before** the transfer is made.
- Ensure that the transfer operation is monitored constantly to prevent overfilling and spilling.

It's a good idea to physically measure (don't rely solely on automated devices) the level of fuel that is already in the tank **before** beginning preparations to re-fill the tank. To be safe, measure twice and double-check your calculations (have someone else check your calculations as well). During re-filling, the delivery person should never leave the tanker unattended while fuel is being transferred. It is important to take extra precautions up front and avoid costly and potentially disastrous accidents.

Additional information about proper filling procedures may be found in the National Fire Protection Association Publication 385. Further guidance on spill and overfill prevention appears in American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," and National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code."

What To Do If a Discharge Occurs

This portion of the section is not intended to function as adequate spill response training for contractors involved in a tank spill or leak. It is only to serve as a reminder for fully-trained emergency responders of what NASP expects during an emergency.

A discharge is considered an uncontrolled situation. Until the discharge is contained, the response should be handled as an emergency, and only trained, medically monitored and properly protected individuals are permitted involvement in the response. Always contact NASP Environmental immediately upon discovery of a discharge.

If the discharge is in the process of occurring and the material has been positively identified, then take appropriate evacuation measures for the volume and type material involved. After non-essential personnel have been safely evacuated, identify the source and stop the flow, if possible. After the source of the discharge has been controlled, minimize contamination by containing the discharged material. Contain the discharge by using spill pads, absorbent boom or other available material. Perform cleanup activities as soon as possible to lessen the possibility of contamination. Follow up with appropriate notification to the regulatory agencies.

What Do Regulators Look for During Inspections?

During a UST inspection, regulators mostly inspect paperwork, but also inspect the monitor wells and visible piping and equipment. During AST inspections, the tank, piping, secondary containment, any monitor wells and records are all inspected.

Records that most likely will be requested include:

- Material purchase logs
- Usage logs
- Maintenance and repair records
- Tank inspection logs
- Laboratory analytical data from monitor well sampling events, if any occurred
- Employee training records
- Notification of releases

Secondary containment structures should be intact with no cracks or holes. If the secondary containment structure is fitted with a valve, inspectors will look to see that the valve is closed, and whether or not there is staining on the ground beneath the opening.

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the

final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites for Further Information

- US EPA Office of Underground Storage Tanks
<http://www.epa.gov/swerust1/index.htm>
- US EPA Region IV UST Program
<http://www.epa.gov/region4/water/ust/>
- The Steel Tank Institute
<http://www.steeltank.com/>

Pesticides

In Florida, pesticides are used in many applications, including termite protection and treatment, mosquito control, grounds maintenance and numerous agricultural operations. Both residential and industrial settings rely heavily on pesticide control measures in our state. This section is intended to provide a summary of the applicable regulations that would apply to contractors operating in Florida.

Major Federal Laws And Regulations

The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) regulates registration, sale, use and production of pesticides.

The Resource Conservation and Recovery Act (RCRA) regulates disposal of pesticides.

The Worker Protection Standards (WPS) became law in 1992 to limit the risk of injury to workers and handlers who are exposed to pesticides in the agricultural workplace. The WPS applies to greenhouse, nursery, forestry and farm applications.

Florida Applicable Laws And Regulations

Department of Agriculture and Consumer Services (FDACS) administers the FIFRA program in Florida. Through the FDACS Division of Agricultural Environmental Services, mosquito control program coordination; pesticide registration, testing and regulation; pest control regulation; and feed, seed and fertilizer production, inspection and testing programs are administered.

The Bureau of Pesticides within the Division of Agricultural and Environmental Services implements the WPS program.

Navy Pesticide Policy

It is Navy and Marine Corps policy to:

- a. Prevent pests from adversely affecting military operations and missions

- b. Safeguard human health and morale by controlling pests that transmit diseases, annoy personnel or represent a hazard to public health or safety
- c. Maintain and extend the service life of facilities, structures and material by preventing economic pest damage
- d. Enhance the natural environment through careful protection and management of ecosystems, endangered and threatened species, wildlife, watersheds and water quality in order to maintain optimal biodiversity
- e. Ensure pesticide use is safe and consistent with label directions
- f. Use the principles of Integrated Pest Management (IPM) to avoid and minimize use of pesticides when nonchemical alternatives are available and cost-effective
- g. Comply with quarantine laws and regulations as related to protecting plants, animals and human health
- h. Comply with laws and regulations concerning pesticide storage, application, disposal of hazardous wastes and transport of hazardous materials and substances

General Description of Requirements

All pesticides used in the US must be registered by EPA. FIFRA governs the distribution, sale and use of all pesticides, and specifies licensing requirements. The FDACS Division of Agricultural Environmental Services, Bureau of Pesticides is responsible for:

- Registering pesticides
- Approving registration of experimental use pesticides
- Labeling amendments for new uses, new targets
- Handling requests for federal emergency exemptions
- Overseeing requests for Florida specific pesticide labels

Licensing Requirements for Applicators

FDACS is responsible for the following licenses:

- Structural and Commercial Lawn and Ornamental Pest Control
- Commercial Pest Control Business Licensure

The department may issue licenses to qualified persons in order to engage in the business of pest control in the categories of General Household Pest and Rodent Control, Termite Control, Lawn and Ornamental Pest Control or Fumigation.

- Pest Control Operator (PCO) Certificate

Pest Control operator's certificates are issued to persons who pass the written examination given by this agency and who are not minors. Qualifications for examination can be met by experience or education plus experience. Each operator must renew his/her certificate annually, and show proof of continuing education.

- Special Identification Card for Performance of Fumigation

Any individual who performs fumigation must be a special identification cardholder unless such individual is a certified operator who is certified in the category of fumigation. The department may issue special identification cards to qualified individuals who pass written examinations. Each special identification card must be renewed annually with proof of continuing education.

- Limited Certification -- Lawn and Ornamental (government and private property applicators)

Limited Certification is required for persons applying pesticides as a governmental employee, a private property applicator, or an employee making pesticide applications to private property owned by the employer. This includes properties such as public buildings, schools, hospitals, nursing homes, grocery stores, restaurants, apartments and common areas of condominiums.

(A person seeking limited certification under this category must pass an examination given or approved by the department. This certification must be renewed every four years with submission of approved continuing education. There are two categories of Limited Certification: Lawn and Ornamental and Structural Pest Control. This certification does not authorize operation of a pest control business.)

- Limited Certification for Commercial Landscape Maintenance Personnel

This category allows commercial landscape maintenance personnel to apply herbicides for controlling weeds in plant beds and to perform integrated pest management on ornamental plants using certain materials. This certification does not authorize the application of pesticides to turf or the operation of a pest control business.

(A person seeking certification under this section must pass an examination given by the department, must furnish proof of having a certificate of insurance, have completed 8 classroom hours of plant bed and ornamental continuing education and show proof of being in the landscape maintenance business for at least 3 years. This certification must be renewed annually by showing proof of approved continuing education.)

- Mosquito Control

Bureau of Entomology and Pest Control regulates the application of both restricted use and general use pesticides for arthropod control of public health significance. This includes those insects of public health or nuisance importance including all mosquitoes, midges, sand flies, dog flies, yellow flies and houseflies.

- Public Health Pest Control (PHPC) License

All persons conducting public health pest control must have a PHPC License. This category includes public applicators using or supervising the use of restricted use or general use pesticides in public health programs for the management and control of pests having medical, public health or nuisance importance. A public applicator who applies any pesticide for public health arthropod control from an aircraft must also be licensed in the Aerial Category. License in this category is used only in conjunction with licensure in the Public Health Category.

- Pesticide Certification

Division of Agricultural Environmental Services, Bureau of Compliance Monitoring, Pesticide Certification Section is responsible for:

- Approving use of Aldicarb (Temik)
- Granting approval for Continuing Education Units for license recertification
- Continuing Education Units for our Remote CEU program
- Licensing dealers for sale of restricted-use pesticides (also called RUP's)
- Approving licenses and license renewals for Private, Public and Commercial Restricted Use Pesticide Applicators
- Reciprocal Agreements to select licensed applicators from approved states
- Worker Protection Exemption stickers for Certified Crop Advisors

Storage and Disposal

All pesticides should be used for their intended purpose. They should be stored in their original containers, if possible, and protected from exposure to weather. All containers should be labeled as to their contents, and be disposed properly when expiration dates come due. Pesticides that are considered hazardous waste when being managed for disposal are regulated under RCRA, and should be handled in accordance with the Hazardous Waste requirements outlined in Section 3.

Pesticide Mix/Load Sites

Mixing should be done over an impermeable surface, and rinsate collected for reuse with the next batch. Any contaminated soils must be removed and managed in accordance

with the applicable solid waste/hazardous waste management requirements. Contact FDACS, Bureau of Pesticides, for specific plans on constructing pesticide mix/load sites.

Worker Protection Standards

The worker protection standards require that all farm workers receive basic pesticide safety training before working in any treated area, that workers complete WPS training before 6 days of work, and that pesticide handlers must be trained before working with pesticides. FDACS periodically offers Train-the-Trainer sessions and continuously offers various other outreach activities in an effort to keep agricultural workers and handlers informed. Contact your local county agriculture extension office for WPS training information.

What Do Pesticide Inspectors Look for During Inspections?

Inspectors have authority under FIFRA and Florida Statutes, Chapter 487 (Florida Pesticide Law), to have access to all records pertaining to use, sales, purchases, WPS training, application, production, imports, exports, etc.

Inspectors from FDACS will not check inventory, disposal receipts or manifests unless there is a complaint for a specific reason involving this.

Pesticide inspectors normally will investigate the following:

1. What pesticides are being used
 - a. If they are state registered
 - b. If they are being used as listed on the label. This includes dilution/application rates, method of application and application in proper areas.
2. If the pesticide has WPS/Agricultural-use statements on the label, then:
 - a. Application records are reviewed
 - b. Inspection is conducted to determine if proper personal protective equipment is being used
 - c. Determination is made regarding proper pesticide use (proper area, crop, target pest, etc.)
 - d. Records are inspected to determine if workers are properly trained in WPS. WPS documentation records are required to be kept for 30 days for general use pesticides, and 2 years for restricted-use pesticides.
3. If a product is a restricted-use pesticide (RUP), then the inspector will ask to see a license held by the applicator or supervisor of the applicator.

Many pesticides require management as hazardous waste when disposed. For this reason, some facilities are subject to inspection by FDEP Hazardous Waste section inspectors. Typically, these inspectors will be interested in the mix/load area, and pesticide storage buildings. Hazardous waste program inspectors will usually take an inventory of

pesticides in the storage area. Inspectors will also inspect training and worker safety documentation, purchasing records, disposal receipts, and manifests. If there is any hazardous waste on site at the time of the inspection, proper container management will be expected. Container management and hazardous waste management is detailed in Section 3, "Hazardous Waste."

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites For Further Information

- US EPA
<http://www.epa.gov/>
- Florida Department of Agriculture and Consumer Services
<http://doacs.state.fl.us/>
- US Department of Agriculture
<http://www.usda.gov>
- EPA The Worker Protection Standard for Agricultural Pesticides
http://ipmwww.ncsu.edu/safety/epawps_intro.html
- EPA mosquito control factsheet
<http://www.epa.gov/pesticides/factsheets/skeeters.htm>
- USDA Chief Economist's Office, Agricultural Labor Resources
<http://www.usda.gov/agency/oce/oce/labor-affairs/laborres.htm>

Natural and Cultural Resources

Natural resources in this section include ecosystems and elements of ecosystems. Specific elements include forests, wildlife, water, animals, birds, plants, insects, amphibians, fish, reptiles, trees, soil, wetlands and land features. Archaeological sites, historic buildings, and other cultural resources connected with land use are also included. This section is designed to give a very brief informative description about the requirements a federal facility must adhere to in order to comply with natural resources protection laws.

General Description

Federal facilities are located on property owned by the public. There are several regulations specifically designed to protect ecosystems, species and lands associated with federal use. The goal of the laws is to preserve, manage and restore natural resources treasures for future generations of Americans to enjoy.

NEPA

NEPA stands for the National Environmental Policy Act. This act requires all federal agencies to:

- “Assess the environmental impacts of major federal projects or decisions such as issuing permits, spending federal money, or actions that affect federal lands.”
- Consider the environmental impacts in making decisions.
- Disclose the environmental impacts to the public.

For the most part, NEPA sets standards for the federal government to keep the general public informed of activities taking place on lands within the public domain.

Archaeological/Historical/Cultural

The National Historic Preservation Act was amended to become the Archaeological and Historic Preservation Act (AHPA). This act requires federal facilities to identify, evaluate, register, protect and preserve historic properties.

Endangered/Protected Species

The Endangered Species Act provides a program for the conservation of threatened and endangered plants and animals and their habitats. The US Fish and Wildlife Service (FWS) maintains a list of 632 endangered species and 190 threatened species. Anyone can petition to put a species on the list, and then the FWS will evaluate the petition for merit.

EPA's role in the ESA is that EPA must ensure that no pesticides regulated under FIFRA will cause harm to any species on the FWS list. Additionally, EPA coordinates land management activities with FWS, U.S. Army COE, state agencies and federal agencies to ensure NEPA compliance.

Reporting Requirements

If an endangered or threatened species is encountered, its location is to be reported to the FWS to determine what actions are necessary.

The Archaeological and Historic Preservation Act (AHPA) requires that federal agencies must notify the Department Consulting Archaeologist (DCA) of the National Park Service in writing when a federal or federally funded ground-disturbing project threatens or damages significant scientific, prehistorical, historical or archaeological data.

What Do You Do If You Unexpectedly Encounter A Protected Natural or Cultural Resource?

Notify Navy Regional Command Natural Resources Manager or Cultural Resources Manager and stop all work until further notice.

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites for Further Information

- US EPA
<http://www.epa.gov>
- US Fish and Wildlife Service
<http://www.fws.gov>
- US Department of Agriculture
<http://www.usda.gov>
- Florida Fish and Wildlife Conservation Commission
<http://www.state.fl.us/fwc>
- Defense Environmental Network Information Exchange (DENIX)
<http://www.denix.osd.mil>

Pollution Prevention

US EPA Applicable Laws and Regulations

In 1990, Congress passed the Pollution Prevention Act. It focused attention on encouraging industry, government and the public to reduce pollution amounts generated through cost-effective changes in production, operation and raw materials use. Many environmental laws focus on management of pollution and waste, while the PPA puts emphasis on source reduction and lessening the need for pollution control equipment.^{xi}

Florida Applicable Laws and Regulations

There is no specific regulation for pollution prevention measures in Florida, but all legislation promotes pollution prevention practices.

General Description

Pollution prevention measures encourage:

- Substituting raw materials for less toxic ones or ones that can be reused or recycled
- Modifying processes so that less raw material is used, or so that less pollution is allowed to escape to the air, ground or water
- Upgrading equipment to be more environmentally beneficial
- Redesigning products so that they are still viable, but easier to manufacture with less raw materials or pollutant generation

To make a pollution prevention program work in an organization, several things must be done:

- Make P2 the goal of the entire organization by getting strong support from top management. To do this, show examples of how other companies have benefited monetarily. Get success stories from your regulator, and then call the company to ask questions. Most facilities enjoy showing new equipment and/or ideas.
- Keep track of waste management costs so savings will be more apparent.

- Allocate costs to activities responsible for incurring the costs. This will ensure that you can identify exactly which processes are costing the most money, and where P2 efforts will have the most impact.
- Share ideas and explore all options. Make sure to get staff involved in the process, especially the staff most familiar with the processes. Many times ideas are out there, but communication is inefficient.
- Periodically review your P2 plan so it remains an up-to-date working document.

Source Reduction

Limit the amount of raw materials needed for a job. Instead of buying more because you “may need it,” only purchase what is necessary. Sometimes, it seems that purchasing in larger volumes is a better deal, but then the disposal of unused material becomes an expensive proposition.

Purchasing

P2 begins at the moment raw materials are purchased. When considering purchases, compare the initial cost, any cost incurred in training employees, disposal or added insurance costs and regulatory requirements. After making such considerations, investigate if any alternatives exist and compare the overall costs to each other.

Project Run-off

Unnecessary grading and removal of vegetative cover can result in unsecured soils being washed down storm water control systems and into water bodies. Disturbed areas should use proper erosion control techniques to prevent project run-off.

Elimination of the Use of Toxic Materials

Using less toxic materials limits your liability for worker health issues, lowers disposal costs and decreases regulatory reporting requirements. Many of the more environmentally friendly alternatives have been shown to work better than their more toxic counterparts.

Typical Projects Implemented^{xii}

- Segregate waste streams. Mixed waste streams are more costly to dispose of.
- Control access to raw materials storage areas and assign someone to distribute raw materials.
- Recycle or reuse cleaning, lubricating and cooling fluids.
- Substitute citrus-based cleaners for petroleum- or solvent-based ones.
- Use water-based paints and coatings to minimize the use of solvents and also reduce the emissions caused by using solvents.
- Avoid unnecessary grading and removal of vegetative cover to minimize road run-off into surface water.

- Use waterborne or thermoplastic paint.
- Consider deconstruction and reuse of existing buildings rather than demolition.
- Use high efficiency lighting and electronic ballasts.

Benefits

By implementing pollution prevention strategies, you:

- Lower hazardous waste generation rates
- Decrease disposal costs
- Use (purchase) less raw materials
- Create a healthier environment for employees
- Reduce record-keeping requirements
- Reduce operating costs
- Enhance your company's image

Role of the Regulators

Regulators have many opportunities to speak to trade associations, industry groups, attend workshops and conferences and inspect facilities. Because of their exposure to many different forums for gaining knowledge, they are wonderful resources for suggesting what other facilities have tried or are using.

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites for Further Information

- US EPA
<http://www.epa.gov>
- FDEP
<http://www.dep.state.fl.us>
- The Local Government Environmental Assistance Network (LGEAN)
<http://www.lgean.org>
- National Metal Finishing Resource Center
<http://www.nmfrc.org>
- The National Agriculture Compliance Assistance Center
<http://es.epa.gov/oeca/ag/>

Contamination Remediation

This section is intended to provide a very broad and brief summary of general contamination remediation information. Immediate spill response is expected of any contractors and NASP Region personnel involved in the activity resulting in a spill, but long-term environmental restoration or cleanup only be handled on a case-specific basis by professional cleanup contractors.

US EPA Applicable Laws and Regulations

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) is also known as Superfund. This law identifies hazardous substances that may endanger public health or the environment and specifies cleanup procedures pursuant to the National Contingency Plan. Superfund cleanups typically involve sites where there is no identifiable responsible party, or multiple potentially responsible parties.

The Resource Conservation and Recovery Act (RCRA) specifies cleanup of sites in which chemicals identified as hazardous waste have been discharged.

Florida Applicable Laws and Regulations

The state agency that implements the preparedness and notification requirements of CERCLA is the Department of Community Affairs (DCA). The state agency that monitors cleanup of contaminated sites is FDEP.

General Description of What Is Regulated

The CERCLA regulations contain a list of hazardous substances that are regulated when a release occurs. The hazardous substances list is found in Title 40 CFR Part 302. Whenever the specified amount or more of the listed substance is released, then

notification must be made to DCA within 24 hours of discovery of the release. (If a site is deemed contaminated but the actual release cannot be pinpointed, then there really are no reporting requirements.)

Typical Projects Implemented

CERCLA type cleanups usually are initiated when contamination is discovered through routine sampling or earth-moving activities. In such instances, it would be difficult to determine the origin of the contamination or the time frame in which it occurred.

RCRA-based cleanups are conducted when the origins of the contamination are known to be from hazardous waste or hazardous waste constituents.

Benefits

Once a cleanup has been carried out under the guidelines of either CERCLA or RCRA, the facility will be released from liability for further cleanup in the future, unless a new source is discovered.

Role of the Regulators

Any time a contaminated site is discovered, the regulatory agencies will want to make an expeditious determination regarding the most appropriate regulation to follow in addressing cleanup. Because funding is provided to state agencies from the federal government, agencies must determine the most appropriate remediation track in order to avoid jeopardizing delegation. It is crucial that a facility be very involved in the process of determining which regulations will drive the restoration. Work closely with the individuals assigned to monitor a site's cleanup activities, and make sure that expensive studies do not "fall through the cracks" and have to be funded again when the data is no longer current.

Usually an agency will press a facility to enter into a cleanup agreement of some type. Such an agreement, or order, is intended to be a document which will prove to the public that the cleanup is proceeding in accordance with all applicable laws. It also protects the facility from further enforcement for the same issues. It may even thwart some individuals from filing third party liability lawsuits because it shows a degree of diligence on the part of the responsible parties.

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites for further information

- US Environmental Protection Agency
<http://www.epa.gov>
- Florida Department of Community Affairs
<http://www.dca.state.fl.us>
- Florida Department of Environmental Protection
<http://www.dep.state.fl.us>

Quality Control

Self-Assessments

Self-assessments, or audits, are intended to identify regulatory concerns before an inspector finds them. For the most part, self-assessments tend to make facilities realize cost savings and form more stringent requirements than the regulations require.

ISO 14001

ISO stands for “International Organization for Standardization” and sets strict requirements for receiving certification under its standards. ISO 14001 is the standard that sets guidelines for environmental management.

Environmental Management Systems

Environmental management systems are detailed guides for helping a business identify environmental measures that need to be targeted for compliance. Most environmental management systems use quality guidelines similar to those contained in ISO 14001 prior to making the commitment to seek certification in that standard.

Contractor Quality Control

The contractor shall generally be required to establish and maintain a QC program. The QC program generally consists of a QC Organization, a QC Plan, [a QC Plan meeting,] a Coordination and Mutual Understanding Meeting, QC meetings, three phases of control, submittal review and approval, testing, completion inspections and QC certifications and documentation necessary to provide materials, equipment, workmanship, fabrication, construction and operations which comply with the requirements of this contract. The QC program shall cover on-site and off-site work and shall be keyed to the work sequence. No work or testing may be performed unless the QC Manager is on the work site. The project superintendent will be held responsible for environmental aspects of work on the job and is subject to removal by the Contracting Officer for non-compliance with environmental requirements specified in the contract. The project superintendent in this context shall mean the individual responsible for overall management of the project including environmental compliance, quality and production.

The contractor shall generally be required to maintain a QC Manager at the work site to implement and manage the Environmental Compliance program. The QC Manager shall be responsible for the Coordination and Mutual Understanding Meeting, conducting the QC meetings, performing the three phases of control, performing submittal review and approval, ensuring testing is performed and providing QC certifications and documentation required in the contract. The QC Manager is responsible for managing and coordinating the three phases of control and documentation performed by the Testing Laboratory personnel and any other inspection and testing personnel required by the contract.

The contractor shall generally be responsible for providing a QC plan submitted in a 3-ring binder with pages numbered sequentially that covers both on-site and off-site work and includes the following:

- a. A table of contents listing the major sections identified with tabs in the following order:
 - I. QC ORGANIZATION
 - II. NAMES AND QUALIFICATIONS
 - III. DUTIES, RESPONSIBILITY AND AUTHORITY OF QC PERSONNEL
 - IV. OUTSIDE ORGANIZATIONS
 - V. APPOINTMENT LETTERS
 - VI. SUBMITTAL PROCEDURES AND INITIAL SUBMITTAL REGISTER
 - VII. TESTING LABORATORY INFORMATION
 - VIII. TESTING PLAN AND LOG
 - IX. PROCEDURES TO COMPLETE REWORK ITEMS
 - X. DOCUMENTATION PROCEDURES
 - XI. LIST OF DEFINABLE FEATURES
 - XII. PROCEDURES FOR PERFORMING THE THREE PHASES OF CONTROL
- b. A chart showing the QC organizational structure.
- c. Names and qualifications, in resume format, for each person in the QC organization.
- d. Duties, responsibilities and authorities of each person in the QC organization.
- e. A listing of outside organizations such as architectural and consulting engineering firms that will be employed by the Contractor and a description of the services these firms will provide.

- f. Letters signed by an officer of the firm appointing the QC Manager and Alternate QC Manager and stating that they are responsible for implementing and managing the QC program as described in this contract. Include in this letter the responsibility of the QC Manager and Alternate QC Manager to implement and manage the three phases of quality control, and their authority to stop work that is not in compliance with the contract. The QC Manager shall issue letters of direction to [the Assistant QC Manager and] all other QC specialists outlining their duties, authorities and responsibilities. Copies of the letters shall be included in the QC plan.
- g. Procedures for reviewing, approving and managing submittals. Provide the name[s] of the person[s] in the QC organization authorized to review and certify submittals prior to approval. Provide the initial submittal of the Submittal Register as specified in section entitled "Submittal Procedures."
- h. Testing laboratory information required by the paragraphs entitled "Accredited Laboratories" or "Testing Laboratory Requirements," as applicable.
- i. A Testing Plan and Log that includes the tests required, referenced by the specification paragraph number requiring the test, the frequency and the person responsible for each test.
- j. Procedures to identify, record, track and complete rework items.
- k. Documentation procedures, including proposed report formats.
- l. List of definable features of work.. A definable feature of work (DFOW) is a task that is separate and distinct from other tasks and requires separate quality control requirements. A DFOW could be identified by different trades or disciplines or by an item or activity on the construction schedule. Although each specification section could be considered a definable feature of work, there frequently is more than one definable feature of work under a particular section. The list shall be cross-referenced to the contractor's Construction Schedule and the specification sections. For projects requiring a Progress Chart, the list of definable features of work shall include but not be limited to all items of work on the schedule. For projects requiring a Network Analysis System, the list of definable features of work shall include but not be limited to all critical path activities.
- m. Preparatory and Initial Phase Checklists. For each DFOW, provide the DFOW's Preparatory and Initial Phase Checklists. Each list shall include a breakdown of quality checks that will be used when performing the quality control functions, inspections and tests required by the contract documents. The Preparatory and Initial Phases and meetings shall be conducted with a

view towards obtaining quality construction by planning ahead and identifying potential problems for each definable feature of work.

Reports are required for each day that work is performed, for every seven consecutive calendar days of no work and on the last day of a no-work period. Account for each calendar day throughout the life of the Contract. The reporting of work shall be identified by terminology consistent with the construction schedule. Contractor Quality Control Reports are to be prepared, signed and dated by the QC Manager.

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites for Further Information

- US EPA
<http://www.epa.gov/>
- The ISO 14000 Information Center
<http://www.iso14000.com/>

Environmental Health and Safety

US Applicable Laws and Regulations

Compliance with US environmental health and safety laws involves understanding complex regulations administered by numerous agencies. The Federal Occupational Safety and Health Administration (OSHA), within the US Department of Labor, is the lead agency for promulgating employee health and safety regulations. The National Institute of Occupational Safety and Health (NIOSH), within the Department of Health and Human Services, is a research institute responsible for conducting research and making recommendations for the prevention of work-related illnesses and injuries. Both OSHA and NIOSH were created in 1970 under the Occupational Safety and Health Act.

Many other federal agencies have worked with OSHA to develop and enforce laws pertaining to protecting workers involved in particular settings. For example, EPA has been involved with legislation that includes criteria for employees who hold jobs involving chemical management and toxic waste disposal. The Department of Agriculture oversees requirements for employees working with fertilizers and pesticides. The Department of Energy works with OSHA to maintain regulations designed to protect employees from radioactive and explosive dangers.

Florida Applicable Laws and Regulations

Florida recognizes the federal OSHA regulations. As of this writing, there is no agency in Florida that has received federal delegation to implement an occupational safety and health program. On June 30, 2000, the Florida Department of Labor and Employment Services abolished the Division of Safety pursuant to legislative mandate. The Division of Safety had historically provided consultation services and training to businesses and public agencies. No state agency is slated to continue the duties of the Division of Safety. Federal OSHA currently handles complaints from employees and reports of accidents.

The Department of Environmental Protection (FDEP) inspects facilities to determine if required safety training is being conducted and if preparedness and prevention measures are in place pursuant to EPA laws. The Department of Agriculture and Consumer Services (FDACS), Bureau of Pesticides, offers guidance to agricultural employers on proper training of workers who handle pesticides and fertilizers. FDACS also provides low-cost training and other resources to ensure that workers are made more knowledgeable about the hazards in the agricultural workplace.

General Description of What Is Regulated

OSHA general industry standards for environmental health and safety are contained in Title 29 Code of Federal Regulations (CFR), Part 1910. Specific safety and health regulations for the construction industry is contained in Title 29 CFR, Part 1926.

The goal of the act is to establish a place of employment where workers are free from exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress or unsanitary conditions.

General Description of Safety Requirements for Construction Contractors

While working on any NASP Region facility, contractors should be aware of their expectations regarding safety. The Navy is committed to providing a safe working environment at all installations. Below is information included in contracts assigned for work on NASP Region projects.

The contractor shall generally be required to maintain a Safety Specialist at the work site to perform safety management, surveillance, inspections and safety enforcement for the contractor. The Safety Specialist shall be the safety "competent person" as defined by Corps of Engineers Safety Manual EM-385-1-1. The Safety Specialist shall be at the work site at all times whenever work or testing is being performed, shall conduct daily safety inspections and shall have no other duties other than safety management, inspections and safety enforcement on this contract.

The contractor shall generally be required to submit a Health and Safety plan for projects involving the handling of hazardous materials. The contractor shall allow 30 calendar days for review by Naval Environmental Health Center (NEHC) for health hazard review and Naval Facilities Engineering Command, Engineering Field Division (EFD) or Engineering Field Activity (EFA) construction safety manager. The Contracting Officer will act on the Health and Safety plan only after 30-day NEHC and EFD/EFA safety manager reviews.

The contractor shall also generally be required to prepare an Accident Prevention Plan in accordance with the required and advisory provisions of Corps of Engineers Safety Manual EM-385-1-1 including Appendix A, "Minimum Basic Outline for Preparation of Accident Prevention Plan," and as modified herein. Include the associated AHA and other specific plans, programs and procedures listed on Pages A-3 and A-4 of Corps of Engineers Safety Manual EM-385-1-1, some of which are listed below.

Contents of the Accident Prevention Plan

The Accident Prevention Plan must include:

- a. Name and safety-related qualifications of safety officer (including training and any certifications)
- b. Qualifications of competent and of qualified persons
- c. Identity of individual who will complete exposure data (hours worked); accident investigations, reports and logs; and immediate notification of accidents to include subcontractors
- d. Emergency response plan. Conform to [COE EM-385-1-1](#), paragraph 01.E and include a map denoting the route to the nearest emergency care facility with emergency phone numbers. Contractor may be required to demonstrate emergency response.
- e. Confined Space Entry Plan. Identify the qualified person's name and qualifications, training and experience. Delineate the qualified person's authority to direct work stoppage in the event of hazardous conditions. Include procedure for rescue by contractor personnel and coordination with emergency responders. (If there is no confined space work, include a statement that no confined space work exists and none will be created.)
- f. Hazardous Material Use. Provisions to deal with hazardous materials, pursuant to the Contract Clause "FAR 52.223-3, Hazardous Material Identification and Material Safety Data." And the following:
- g. Inventory of hazardous materials to be introduced to the site with estimated quantities
- h. Plan for protecting personnel and property during the transport, storage and use of the materials
- i. Emergency procedures for spill response and disposal, including a site map with approximate quantities on site at any given time. The site map will be

attached to the inventory, showing where the hazardous substances are stored.

- j. Material Safety Data Sheets for inventoried materials not required in other section of this specification
- k. Labeling system to identify contents on all containers on-site
- l. Plan for communicating high health hazards to employees and adjacent occupants
- m. Hazardous Energy Control Plan. For hazardous energy sources, comply with COE EM-385-1-1, paragraph 12.A.07.
- n. Critical Lift Plan. Weight-handling critical lift plans shall be prepared and signed in accordance with COE EM-385-1-1, paragraph 16.c.18.
- o. Alcohol and Drug Abuse Plan
- p. Describe plan for random checks and testing with pre-employment screening in accordance with the DFAR Clause subpart 252.223-7004, "Drug Free Work Force."
- q. Description of the on-site prevention program
- r. Fall Protection and Prevention (FP&P) Plan. The plan shall be site-specific and address all fall hazards in the work place. It shall address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 6 feet. A qualified person shall prepare the plan. The plan shall include fall protection and prevention systems, equipment and methods employed, responsibilities, rescue and escape equipment and operations, training requirements and monitoring methods. FP&P Plan shall be revised [once every six months] for lengthy projects to reflect any new changes during the course of construction, due to changes of personnel, equipment, systems or work habits.
- s. Silica Exposure Reduction. The plan shall include specific procedures to prevent employee silica inhalation exposures.
- t. Lead Abatement Plan. The safety and health aspects of lead-based paint removal, prepared in accordance with the contract section entitled, "Removal and Disposal of Lead-Containing Paint"
- u. Asbestos Abatement Plan. The safety and health aspects prepared in accordance with Section 13281, "Engineering Control of Asbestos Containing Materials"

- v. Site Demolition Plan. The safety and health aspects prepared in accordance with the contract section, "Site Demolition"
- w. Excavation Plan. The safety and health aspects prepared in accordance with the contract section, "Excavation, Backfilling, and Compacting for Utilities"
- x. Training Records and Requirements. List of mandatory training and certifications which are applicable to this project which specifically includes all environmental training records and others (e.g. explosive actuated tools, confined space entry, fall protection, crane operation, vehicle operator, forklift operators, personal protective equipment), list of requirements for periodic retraining/certification, outline requirements for supervisory and employee safety meetings
- y. Severe Weather Plan. Procedures for ceasing on-site operations during lightning or upon reaching maximum allowed wind velocities
- z. Emergency Lighting and Power Systems Plan (e.g. periodic testing of batteries for emergency lighting)
- aa. The contractor shall generally be required to obtain a Certified Industrial Hygienist (CIH) or a Certified Safety Professional (CSP) to prepare the Health and Safety Plan, conduct activity hazard analyses, and prepare detailed plan for demolition, removal and disposal of materials.

Contents of the Health and Safety Plan

In addition to the requirements of Corps of Engineers Safety Manual EM-385-1-1, Table 28-1, the Health and Safety Plan must include:

- a. Location, size, and details of control areas
- b. Location and details of decontamination systems
- c. Interface of trades involved in the construction
- d. Sequencing of work
- e. Disposal plan
- f. Sampling protocols
- g. Testing labs

- h. Protective equipment
- i. Pollution control plan
- j. Evidence of compliance with 29 CFR 1910.120 and 29 CFR 1926.65
- k. Training and certifications of CIH, CSP or other competent persons

Display the following information in clear view of the on-site construction personnel:

- a. Map denoting the route to the nearest emergency care facility with emergency phone numbers
- b. Activity Hazardous Analysis
- c. Confined space entry permit

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates or lead-based paint are prohibited. Exceptions to the use of any of the above excluded materials may be considered by Contracting Officer upon written request by Contractor.

The design should have identified materials such as PCB, lead paint and friable and nonfriable asbestos. If additional material (not indicated) that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately.

What to Expect during an Inspection

The goal of an inspection by OSHA is to determine if a worksite is safe for employees. Generally, inspections are unannounced but are conducted by a Compliance Safety and Health Officer (CSHO) during work hours. Inspections may be partial or comprehensive, based on the judgment of the CSHO. A programmed inspection is conducted when a facility is chosen based upon objective or neutral selection criteria. An unprogrammed inspection occurs when there has been a complaint or there is reason to believe that an imminent danger to employees exists. The alleged hazard could also be one that is considered to be industry-wide, and therefore an inspection is conducted. The searchable OSHA Field Inspection Reference Manual is located on the OSHA website and goes into great detail about how inspections are conducted and the enforcement process.

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites for Further Information

- OSHA (Occupational Safety and Health Administration)
<http://www.osha.gov>
- NIOSH (National Institute of Occupational Safety and Health)
<http://www.cdc.gov/niosh/homepage.html>
- USEPA
<http://www.epa.gov>
- US Department of Labor
<http://www.dol.gov/>
- NIESH (National Institute of Environmental Health Services)
<http://www.niesh.nih.gov>
- The National Clearinghouse for Worker Safety and Health Training
<http://204.177.120.20/index.htm>
- FDEP (Florida Department of Environmental Protection)
<http://www.dep.state.fl.us>
- FDACS (Florida Department of Agriculture and Consumer Services)
<http://www.doacs.state.fl.us>

Spill Reporting and Release Control

The NASP Region expects that all operations will be conducted to ensure that no humans are endangered, and no releases to the environment occur. This section is not intended to be adequate spill response training for contractors involved in a spill or equipment leak; it is only to serve as a reminder to fully trained emergency responders of what NASP expects during an emergency.

US Applicable Laws and Regulations

The Federal Water Pollution Control Act (FWPCA) and the Deepwater Ports Act regulate oil spills. Chemical releases are regulated under provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLA maintains lists of “hazardous substances” which have reportable quantities for notification to the National Response Center (NRC).

Florida Applicable Laws and Regulations

The state agency that implements the preparedness and notification requirements of CERCLA is the Department of Community Affairs (DCA). The state agency that monitors initial cleanup of releases and site restoration is the Florida Department of Environmental Protection (FDEP).

What to Do In Case of A Spill

A discharge is considered an uncontrolled situation. Until the discharge is contained, the response should be handled as an emergency, and only trained, medically monitored and properly protected individuals are allowed involvement in the response. Always contact NASP Environmental immediately upon discovery of a discharge.

If the discharge is in the process of occurring, and the material has been positively identified, then take appropriate evacuation measures for the volume and type material involved. After non-essential personnel have been safely evacuated, identify the source

and stop the flow, if possible. After the source of the discharge has been controlled, minimize contamination by containing the discharged material. Contain the discharge by using spill pads, absorbent boom or other available material. Perform cleanup activities as soon as possible to lessen the possibility of contamination. Follow up with appropriate notification to the regulatory agencies.

Emergency Contact Numbers

NASP Region Environmental – 850/452-4611 X 111 (Tom Kelley)

National Response Center – 1-800-424-8802

FDEP Bureau of Emergency Response – 1-800-320-0519

Project Cleanup

Upon completion of each project, the contractor will ensure that the worksite is cleaned of all debris. The contractor must also be sure that any chemical waste has been properly removed in accordance with NASP Region protocols. Prior to leaving the jobsite for the final time, a ROICC representative and the contractor shall perform a joint final inspection to determine that no further cleanup efforts are necessary. Following an acceptable inspection, the contracting officer will write a letter to the contractor formally accepting the project.

Web Sites for Further Information

- USEPA Emergency Response
<http://www.epa.gov/swercepp/emerg.html>
- FDEP Bureau of Emergency Response
<http://www.dep.state.fl.us/law/ber/default.html>
- National Response Center
<http://www.nrc.uscg.mil/index.html>
- Florida Department of Community Affairs
<http://www.dca.state.fl.us>

ⁱ EPA, "Summary of Clean Water Act: U.S. EPA Region 5," www.epa.gov/region5/defs/html/cwa.htm, March 25, 2000.

ⁱⁱ EPA, "Summary of Resource Conservation and Recovery Act: U.S. EPA Region 5," www.epa.gov/region5/defs/html/rcra.htm, March 26, 2000.

ⁱⁱⁱ EPA, "Summary of Safe Drinking Water Act: U.S. EPA Region 5," www.epa.gov/region5/defs/html/sdwa.htm, March 26, 2000.

^{iv} Rule 62-620.610(22), F.A.C. General Conditions for All Permits

^v EPA, "Lead & Copper Frequently Asked Questions: Safe Drinking Water Act 1996 Amendments and the NSF Standard," www.epa.gov/OGWDW/standard/lead&cop.html, Revised April 2, 1998.

^{vi} FDEP, "Summary of Hazardous Waste Regulations."

^{vii} FDEP, "Summary of Hazardous Waste Regulations."

^{viii} EPA, "Summary of Clean Air Act: U.S. EPA Region 5," www.epa.gov/region5/defs/html/caa.htm, January 31, 2000.

^{ix} EPA, "Summary of Clean Water Act: U.S. EPA Region 5," www.epa.gov/region5/defs/html/cwa.htm, March 25, 2000.

^x EPA, "Summary of Clean Water Act: U.S. EPA Region 5," www.epa.gov/region5/defs/html/cwa.htm, March 25, 2000.

^{xi} EPA, "Summary of Pollution Prevention Act: U.S. EPA Region 5," www.epa.gov/region5/defs/html/ppa.htm, 6/25/99.

^{xii} Local Government Environmental Assistance Network, "Pollution Prevention in Construction and Maintenance," www.lgean.org/html/p2-2.cfm, 3/25/00.